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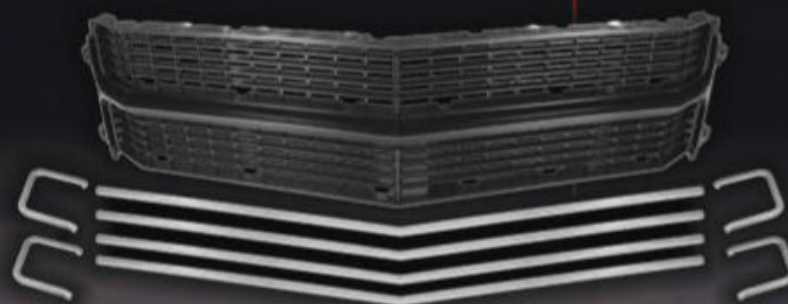
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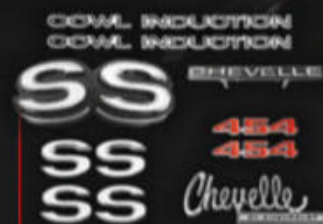
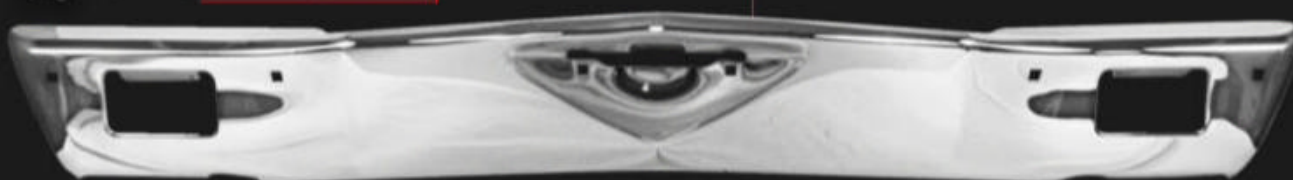
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ISSN 1550-0691 • www.hemmings.com

Published monthly by **Hemmings Motor News**

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Subscription rates in the US and Possessions; 12 issues for \$18.95. Canada \$30.95; (CDN price includes surface mail and GST tax). All other countries \$32.95 in US funds.

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Hemmings Muscle Machines is a publication of

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Spark That Old Flame

When we set out to start planning the articles for this month's Special Section on Enjoying Your Collector Car, there was some confusion among the staff, most of which could be summed up by the question I kept hearing: "What does that mean?"

We'd conceived of the section's title nearly a year prior to embarking on executing its content, so it was understandable that some of the initial discussions had faded from memory. But I'd been thinking about this sort of thing for some time. I took it as a call to actually use our old cars more, and in new ways, rather than what has become the norm for so many of us: the regular ride to the local cruise-in and perhaps an occasional jaunt to a car show or two.

That may sound a bit judgmental on my part, but I'm looking at myself as much as anyone else. My old cars spend way too much time sitting in garages, to the extent that most of them now need attention just to address the ills brought on by their dormancy.

The thing is, these days, if I don't have some sort of goal for the cars—a particular trip or activity, which in turn imposes a schedule with a deadline—I tend to leave them where they are. That random occasional joyride, while still enjoyable, usually doesn't provide enough motivation to take action when there are so many other things demanding attention—work, my family, my house, and all the other things that just about everyone has to manage.

Regardless of how legitimate my excuses may be, the resulting lack of drive nags at me, causing inklings of guilt. Fortunately, I've had one outlet to satisfy my gearhead jones these past few years, which has served to assure me that I haven't lost my love for this stuff. But it's also taught me something about fueling motivation for projects. Or at least, applying lessons learned elsewhere to my automotive endeavors.

I've been fortunate enough to be a part of a group of guys who engage in road racing a couple times a year, which we've been doing for close to a decade now. For each of those



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years, just as winter is starting to release its grip, we arrange a gathering to get the race car ready for a spring race. Once together, we firm up the list of tasks required to prepare the car, divide the work, and get to it. Most times, there's only a couple weeks to get all of it done, but since everyone involved is juggling the duties of full-time lives, nearly all the work must be completed during those precious few weekend days we schedule.

Yet every time, we get it all done, and since the car rarely lets us down, we must be doing something right. Despite what ought to be a high-pressure session to accomplish things as the clock is running, these gatherings are never stressful; often they're nearly as satisfying as the race weekends.

That hanging out with car-guy friends is enjoyable should come as no surprise, but the fact that we get so much done is. The key is, our gatherings are motivated by a purpose: We commit to a race event, reinforced by paying a registration fee that none of us is willing to forfeit, and that fuels the drive to get the work done, along with the anticipated reward of a little wheel-to-wheel track action.

In the realm of the car hobby, plenty of events involving driving an old car now exist, with new ones popping up frequently, each of them offering a goal to shoot for. Anticipating some sort of participatory car event is a great way of reigniting the fire that got most of us into this pursuit in the first place. Once you have the car, or cars, you'd sought for years, and after they've been improved suitably, things can tend to cool a bit. That's where our look at Enjoying Your Collector Car comes in.

Unless your muscle car is a concours showpiece dedicated to judged competition, the outlets for utilizing your classic that we've covered are all suitable ways to exercise the iron. A few additional stone chips and a little extra rubber consumption are probably good trade-offs for the experiences you can have and the rekindled flame you're likely to spark. ■

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INDIANAPOLIS MOTOR SPEEDWAY HALL OF FAME ANNOUNCES 2019 NOMINEES

Each year, voting members of the IMS Hall of Fame cut a list of four candidates down to two inductees, to be announced on March 20. For 2019, candidates are Wally Dallenbach Sr., Dale Earnhardt Sr. (picture left), Dale Jarrett (picture right), and Jacques Villeneuve.

Earnhardt competed in seven Brickyard 400s, including

the first in '94. He won in '95, one of his 76 NASCAR Cup wins over a 25-plus-year career. He was series champion seven times (tying Richard Petty and Jimmie Johnson) before his death in a 2001 Daytona 500 crash.

Before Dallenbach served as competition director and chief steward of CART, he earned his stripes as a racer. Dallenbach began his pro career in stock cars, but soon switched to Indy Cars, racking up 180 starts and five wins over 15 seasons.

Jarrett won the Brickyard 400 twice, but his first victory is memorable for another reason. At the race's end, Jarrett and crew chief Todd Parrott walked out to the "Yard of Bricks," knelt on the track, and kissed the bricks, initiating a tradition that now extends to winners of both the Brickyard 400 and Indy 500.

Villeneuve nearly won the Indy 500 in his first start, delivering a performance good enough for '94 Rookie of the Year honors. He won the race during his sophomore year, on the way to a CART series championship. Villeneuve also raced in the Brickyard 400 and is one of three (with Mario Andretti and Emerson Fittipaldi) to win the CART championship, the F1 championship, and the Indy 500.

Those selected will be inducted on May 23, during the annual Hall of Fame and Oldtimers Club dinner. —**Kurt Ernst**

WHAT COULD BE THE WORLD'S ONLY FRONT-WHEEL-DRIVE CORVETTE DONATED TO NATIONAL CORVETTE MUSEUM

To many, the idea of a Corvette driven by its front wheels amounts to blasphemy. To John Jacobi, it was just practicality, and that individualism has been enshrined in the National Corvette Museum with the donation of the end result: what could be the world's only front-wheel-drive Corvette.

"My dad... strived to do things differently," Jacobi's daughter, Tara, wrote when donating the Corvette.

Jacobi, an engineer and a car enthusiast, built what he could easily buy and repaired what he could easily replace.

The Corvette typified his outlook on life. "We lived on Long Island where winters brought snow," Tara wrote. "My dad wanted a front-wheel-drive vehicle for all-weather handling. Also, after repairing numerous rusty cars, he wanted a fiberglass body."

Jacobi sourced a '79 Corvette body and '79 Cadillac Eldorado chassis from junkyards. His plan, which he had a local chassis specialist sign off on, was to cut 16 inches from the latter's wheelbase and drop the Corvette body on top.



NATIONAL CORVETTE MUSEUM

It proved easier said than done, but five years of work resulted in a running and driving car, one that handled well, according to Jacobi's reports. Registering it in New York, however, proved difficult, and Jacobi discovered that the Corvette had previously been reported stolen. It took buying the car back from a police impound auction for Jacobi to get a clean custom title for the car, which he drove for the next 25 years, until his death in April 2018.

Museum curator Derek Moore noted that Jacobi's Corvette is the only one known to have been converted to FWD.

—**Daniel Strohl**



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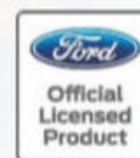


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FORD MOTOR COMPANY

GT500: 700+ HORSEPOWER, 0-60 MID-3s, COMING FALL 2019

The second-worst-kept secret in Detroit, the new Ford Mustang Shelby GT500, has officially been announced at the North American International Auto Show.

At the moment, Ford is quoting “700-plus” horsepower from its supercharged 5.2-liter all-aluminum DOHC V-8. The company is also promising mid-3-second 0-60-mph times and “sub-11-second quarter-mile” timeslips for the quickest acceleration ever in a road-going Mustang. An 11-quart aluminum oil pan will feature active baffles for

extreme performance maneuvers. No stick transmission will be available: GT500’s only transmission is a new seven-speed TREMEC dual-clutch transmission that can go fully automatic, semi-automatic with paddle shifters, or fully manual with paddle shifters.

The GT500’s 5.2-liter version of the DOHC Coyote V-8 adds a Roots-type Eaton supercharger that also allows for a bigger air-to-liquid intercooler. The bigger engine demands a new front fascia, hood, and front fenders to accommodate all of



FORD MOTOR COMPANY



the cooling that 700+ horses require—allowing 50 percent more airflow than a GT350—including a louvered hood vent that measures 6 square feet. Letting all the hot air out from under the hood also allows the nose to stay planted on track and under hard acceleration. Other aerodynamic touches include a new front splitter, a new belly pan, and a track-proven rear wing designed to reduce high-speed lift while minimizing aerodynamic drag.

As you'd expect for a car bearing the Shelby name, substantial attention has been paid to the chassis as well. Available adjustable front camber plates (included with the Handling Package and the Carbon Fiber Track Package) allow owners to increase negative camber for better grip and cornering at the track. New front and rear locating links, lighter high-strength steel springs, an electronic power-steering unit, and a structural brace made from lightweight AE44

magnesium alloy are among the chassis tweaks. The strut tower brace provides a mount for a gas shock for the hood. And the excellent MagneRide shocks are included as well.

Two-piece, 16.5-inch SHW rotors and six-piston Brembo calipers will do the bulk of the braking duties up front. Rear brakes use 14.5-inch SHW rotors and fixed Brembo calipers. Standard wheels are 20 x 11-inch aluminum wheels with 295-305/30ZR20 Michelin Pilot Sport 4S tires, while optional staggered 20 x 11/20 x 11.5-inch carbon-fiber wheels reduce un-sprung weight on their 305-315/30ZR20 Michelin Pilot Sport Cup 2 rubber.

The official *HMM* power guesstimate for the new GT500 is in the mid-700-hp range. Stay tuned for Ford's announcement of the actual power rating and official pricing.

The first-worst-kept secret in Detroit, the mid-engined Corvette, is due to surface later this year. ■



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Letter of the Month: Goat Rescue

It's funny how things end up sometimes. This story starts with a car accident and ends up with a 1968 GTO convertible saved from the scrapyard. In the late 1970s in New York, you could get muscle cars for next to nothing. Sometimes my friend Billy T. and I would see one without license plates in someone's yard, and when we would inquire about the car the owner would be glad to get rid of it.

One day, as I was heading home in my 1967 Chevelle Malibu, I was struck in the side and technically the car was totaled. I found a green 1968 Pontiac Le Mans hardtop with a blown engine for 50 bucks. My friend John R. had just hit a bridge with his GTO, and I was able to purchase that car for two Chevy small-blocks and \$230. The intent was to put the drivetrain from the GTO into the Le Mans and change it from automatic to a four-speed. As luck would have it, another friend, Billy W., asked if I would be interested in his dad's Pontiac station wagon with a 400 and an automatic. I got that car for free, and swapped the engine and trans and fixed the Le Mans up as my daily driver.

My friend Ronnie C. asked me what I was going to do with the wrecked GTO now that the Le Mans was running. I said I had planned to fix it up and drive it. My friends all laughed and said it was too far gone. Four or five weeks later it looked like it does in the photo of my friend driving it across the Croton Dam. That was back in 1979.

I hate saying this, but my GTO is a conglomeration of three other GTOs, two of which were scrapped. I resold one of them because it had Ram Air and I didn't want to see it destroyed. I still remember my dad asking me if I knew what I was doing and if I would be able to put it back together.



I have since restarted a better restoration on it because parts are easier to come by. Recently, while working on replacing seat covers, I found a small pocket knife that I had lost in 1978. My grandfather had given it to me, and I remember looking all over for it back then. It took me back to that time. I also found some Colorforms under the back seat that I had gotten my daughter when she was young, along with a kazoo she used to love to play with.

Thanks for the great magazine.

Harry DiPalma

Delmar, Maryland



THEY STILL WORK

I would like to address a common misconception with these "old cars" that we all love: "Those old cars just don't work right." I heard this when a few fellow car guys were talking about starting their cars on a cold day. While all of us put the cars away for the winter at

the first threat of snow, we try to use them as long as the weather allows us to. Then others commented on how these cars are just not practical for use every day. These statements were even more confounding to me.

Since I moved away from home, I've tried to use my 1963 Chrysler New Yorker (I've come to call her "Daisy") as much as possible, every day throughout three seasons of the year. This car is all-original (and shows it), but the mechanicals are also original and still working. Routinely the car has been completely covered in morning frost, and

I've still intended to use it to go to work that day. One pump of the gas pedal, and Daisy would fire up quicker than my brand-new car, which was sitting right next to it.

"Those old carburetors need a few minutes to warm up or else they just don't work," is another statement that I heard. While I never just get in a car and instantly attempt to drive away, I'm still trying to get to work. I don't have all the time in the world to play with a finicky car. As time has passed, I bet you the people who bought these cars new would've said the same thing.

I've also had people tell me that these old cars just can't hold highway speed for any amount of time on a trip. That always made me wonder—I guess people back in the '60s never traveled by car. Everything must've been by teleportation...

At the end of the day, it comes down to maintenance. If you maintain your car, there's no reason it can't withstand the test of time and continue to perform. While I do agree that there are more factors working

against the cars than there were 50 years ago (i.e., no leaded fuel, ethanol, etc.), these cars still work! While I do wish my car had more of the conveniences that modern cars offer, such as A/C, rear defrosters, and even a simple FM radio, nothing beats the feeling that I get when I fire up that old V-8 and use it. And never to my surprise, she still works, despite what people think of these old cars.

Matthew Labella
Via email



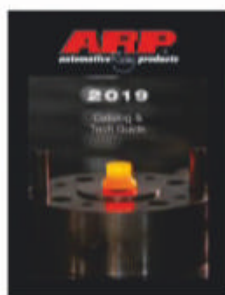
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MORE DOORS

I saw Terry McGean's column in *HMM* #137 about "too many doors." I think four-doors can be neat. For 32 years, I have owned a 1966 Ford Galaxie 500 four-door hardtop. It's powered by a 428 FE big-block, with a C-6 transmission, and a 3.50 Detroit Locker rear end. It is not original, although it could have been ordered that way. It was built for a friend by the late Wittig brothers and Dave Christensen in Port Orchard, Washington, at their shop. It wasn't fast enough for the friend, so I bought it for a song. The engine isn't your basic 428 from the 7-liter car, but it isn't a Cobra Jet either—it's somewhere in between. Since I've owned it, I taught my son (now 44 years old) to drive in it, had it painted Wimbledon White, found a correct all-vinyl interior, and found an XL grille. I belong to the Ford Galaxie Club, and Galaxies Northwest, and am pretty regular at car shows in the summer.

Do I think four doors are too many and can't be neat cars? No sir!

Jerry DelValle
Portland, Oregon

POWERFUL KNOWLEDGE

I was just rereading the July 2018 issue of *HMM*, and on page 50 the article on "Cutting Corners" says: "L79 engine (327-cu.in. 325 hp)"—this is an article on a 1967 Chevelle. Please tell your proofreaders that the L79 engines were all 350 hp.

I love getting *HMM* every month. I owned a 1963 Impala SS 327/300-hp, four-speed, Posi, a 1962 Impala SS convertible with the 409/409-hp, four-speed, and 4.56 rear in a 1965. I also had a 1966 Buick Skylark with 401 and three-on-the-floor. They were my muscle machines!

Your magazine takes me back to the good old days. Dad and Mom bought a new 1955 Ford Fairlane with the Police Interceptor motor, and one of my uncles bought a new 1955 Chevy with the 265 Power-Pack

motor. That was my introduction to muscle machines at 11 years old. Great memories of cars in the '50s and '60s. I relive those days as I read *HMM* each month. Thanks for a great magazine.

Robert Peede
Radford, Florida

Thanks for the kind words on our magazine, Robert! I do have to tell you, though, our proofreaders are on the money. The Chevrolet L79-code 327 was rated at 350 hp for 1966, where it was popular in the Chevy II, but the 1967 version, most often found in Chevelles (though still not common) was indeed rated for 325 hp, and also lost its aluminum intake manifold.

HARDTOP HANG-UP

On page 92 of the February 2018 issue (*HMM* #186), in the Auction News column, you showed a '57 Chevy hardtop—not a 210 sedan, as it said. No big deal—you are as close to perfect as possible. Always enjoy your magazine.

John Bauernhuber
Whiting, New Jersey

You're right to point out that the car shown on that page was a hardtop—it clearly has no B-pillars, and therefore wouldn't normally be referred to as a sedan in Detroit parlance of the time. However, I suspect what happened here is that the model shown should have been referred to as a Sport Sedan—Chevrolet's name for its four-door hardtop models, which were first introduced for the '56 model year. It's sort of hard to see in that photo, but the car in question is actually a four-door, and that's what made it particularly unusual—a fuel-injected 283 V-8 installed in a four-door at the factory. It's also sort of unusual that it is a 210 Sport Sedan and not a Bel Air. But we should have pointed out the four doors and used the Sport Sedan name instead of calling it a sedan.

FORGOTTEN CENTURY

I wanted to thank *HMM* for running the picture of the 1979 Buick Century Turbo Coupe in your article about the Pure Stock Drags ("Pure Stock Lift Off" *HMM* #186). I owned one of these cars and had always felt that they had been overlooked when discussing the lineage of the Buick Grand National. Buick built only a small number of the Century Turbo Coupe: 1,169—one for each

dealership. The controversial "Aeroback" design was made a little more appealing by the addition of a domed hood and rear spoiler. The Turbo V-6 was backed up by a TH350 transmission, and the engine featured improved cylinder heads and a unique exhaust that consisted of a downpipe, a catalytic converter, and two exhaust pipes exiting at the rear of the car—no mufflers, just two small resonators giving the car a totally different sound. The suspension had high-rate springs, bushings, shocks, and large front and rear sway bars. The wheels were a polycast design, carrying on the turbo theme.

Was it a great car? Engine controls were at best primitive, and build quality was less than stellar. The car drove and handled far better than most of its contemporaries. Perhaps you could do an article on these rare machines. To be honest, I didn't know that any still existed, let alone one that could be drag raced.

Marty Isaacson
Indian Harbour Beach, Florida

*Glad you liked it, Marty, and it's good to hear from someone who remembers the details of the short-lived Century Turbo Coupe. You can get another glimpse of that same car in our coverage of the Muscle Car and Corvette Nationals last month, in *HMM* #187.*

PROGRESS REPORT

Great magazine and great mix of articles on all the cars. I especially like the ones where you show how they took a car apart, and then cleaned, prepped, painted, then reassembled it. So cool to see work in progress—one gets the feeling of seeing "light at the end of the tunnel." Reading Terry McGean's February column ("Let's Review," *HMM* #186), the only thing I can say is: Don't change a thing. You're going in a good direction. My suggestion: How about an article on the infamous '68 Darts that came out strictly for racing. Show what they looked like from the factory, then some present-day Hemi racers. Reflect upon the ETs back then compared to now. I think you could fill up quite a few pages with all of that. Those cars were very special back then and today claim big numbers at auction. Thanks, and keep up the great work.

Pete P. Wood
Dale, Illinois ■



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NEW

Customer Rating ★★★★★

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SAVE 33%

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1000 LB. CAPACITY MOTORCYCLE LIFT

Customer Rating ★★★★★

Diamond plated steel platform and ramp

Lift range: 7" to 29-1/2"

NOW \$299.99

COMPARE TO DIRECT-LIFT \$799.99
MODEL: 873100

SAVE \$500

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86734374

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PREDATOR

3500 WATT SUPER QUIET INVERTER GENERATOR

• 11 hour run time

Customer Rating ★★★★★

SAVE \$1,299

NOW \$699.99

COMPARE TO HONDA \$1,999
MODEL: EU3000iS1A

ITEM 63584

86723651

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HaulMaster

40" x 72" MOVING BLANKET

Customer Rating ★★★★★

NOW \$3.99

SAVE 20%

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86723896

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PITTSBURGH

RAPID PUMP® 1.5 TON LIGHTWEIGHT ALUMINUM FLOOR JACK

Customer Rating ★★★★★

3-1/2 pumps lifts most vehicles

Lifts from 3-1/2" to 14-1/8"

Weighs 34 lbs.

NOW \$59.99

COMPARE TO K TOOL \$125.68
MODEL: KT163094

SAVE \$65

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86725671

LIMIT 3 - Coupon valid through 6/15/19*

BRAUN

450 LUMENS LED TROUBLE LIGHT

Customer Rating ★★★★★

Impact-resistant lens and housing

Super-bright 20 LED light source

17"

SAVE 26%

NOW \$19.99

COMPARE TO BAYCO \$22.98
MODEL: FLR-2134PDQ

ITEM 63920

86730647

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HaulMaster

4 PIECE, 1" x 15 FT. RATCHETING TIE DOWNS

Customer Rating ★★★★★

400 lb. working load

NOW \$6.99

SAVE 87%

COMPARE TO ATE TOOLS \$54.88
MODEL: 33079

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86730750

LIMIT 9 - Coupon valid through 6/15/19*

HaulMaster

3/8" x 14 FT., GRADE 43 TOWING CHAIN

Customer Rating ★★★★★

5400 lb. capacity

NOW \$19.99

COMPARE TO MIBRO \$64.99
MODEL: 426920

SAVE 69%

ITEM 60658/97711 shown

86737542

LIMIT 6 - Coupon valid through 6/15/19*

PITTSBURGH

PNEUMATIC ADJUSTABLE ROLLER SEAT

Customer Rating ★★★★★

300 lb. capacity

NOW \$19.99

SAVE 69%

COMPARE TO DURALAST \$64.99
MODEL: TR6201C

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86738378

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13 DRAWER DOUBLE BANK ROLLER CABINET



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41.9"	WIDTH**	40"
14,000 CU.IN.	STORAGE CAPACITY	14,529 CU.IN.
2,600 LBS.	WEIGHT CAPACITY	2,400 LBS.
291 LBS.	CABINET WEIGHT	327 LBS.
~~\$479.99~~	PRICE	\$2,605

Customer Rating



RED

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64134/64133 shown

BLUE

ITEM 64444
64445/64446

BLACK

ITEM 64441
64442/64443

YOUR CHOICE
OF COLOR
~~\$449.99~~

SAVE
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86740046

*SNAP-ON KRA4813FPB0
stated specs
**Width not including handles

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SCISSOR SUPER COUPON

21 GALLON, 2.5 HP, 125 PSI VERTICAL OIL-LUBE AIR COMPRESSOR



Customer Rating
★★★★★

- Air delivery:
5.8 CFM
@ 40 PSI
4.7 CFM
@ 90 PSI

NOW
~~\$229~~
\$174.99

COMPARE TO
HUSKY ~~\$229~~
MODEL: C201H

SAVE
~~\$69~~

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86740197

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SCISSOR SUPER COUPON

FREE
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PITTSBURGH

6 PIECE SCREWDRIVER SET

- Magnetic Tips
- Ergonomic Handles

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MODEL: 20210003

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ITEM 62583
62728/62570 shown



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PITTSBURGH

SCISSOR SUPER COUPON

Customer Rating
★★★★★

CLICK-TYPE TORQUE WRENCHES

LIFETIME WARRANTY

- Reversible

DRIVE	ITEM
1/4"	61277/63881/2696/94735
3/8"	61276/63880/807/94892
1/2"	62431/63882/239/94850

Item 239
shown

COMPARE TO
HUSKY
~~\$84.97~~
MODEL: H2DTWA

SAVE
88%
~~\$199.99~~

YOUR CHOICE
~~\$9.99~~



86746505

LIMIT 9 - Coupon valid through 6/15/19*

BADLAND ZXR SCISSOR SUPER COUPON

12,000 LB. TRUCK/SUV WINCH

- Weights 83.65 lbs.
- 21" L x 10-1/8" H



SAVE
~~\$400~~

COMPARE TO
WARN
~~\$699.99~~
MODEL: 96820

Customer Rating
★★★★★

NOW
~~\$399.99~~
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86746695

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CENTECH SCISSOR SUPER COUPON

2/10/50 AMP, 12 VOLT BATTERY CHARGER AND ENGINE STARTER

Customer Rating
★★★★★



SAVE 50%
~~\$52.99~~

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~~\$29.99~~
\$29.99

COMPARE TO
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ELECTRIC
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MODEL: SE-1250

ITEM 60581
66783/60653 shown



86749768

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20 VOLT LITHIUM CORDLESS EXTREME TORQUE 1/2" IMPACT WRENCH KIT

- 4.0 amp hour battery



1200 TORQUE
FT. LBS.
NOLT BREAKAWAY

SAVE \$470

COMPARE TO
SNAP ON
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MODEL: CT8850PDB,
CT88185, CTC720

ITEM 63537/64195/63852 shown



86752350

LIMIT 3 - Coupon valid through 6/15/19*

drillmaster SCISSOR SUPER COUPON

Customer Rating
★★★★★

7" VARIABLE SPEED POLISHER/SANDER



SAVE
58%
~~\$32.99~~
\$38.99

COMPARE TO
GENESIS
~~\$79.99~~
MODEL: GSP1711

ITEM 62861/92623/69474/60626 shown



86753496

LIMIT 5 - Coupon valid through 6/15/19*

CENTRALPNEUMATIC SCISSOR SUPER COUPON

20 OZ. GRAVITY FEED AIR SPRAY GUN

- 1.4mm tip included



SAVE
80%
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KOBALT
~~\$49.98~~
MODEL: SGV-AIR88TZ

ITEM 67181/62300/47016 shown



86753635

LIMIT 9 - Coupon valid through 6/15/19*

PITTSBURGH AUTOMOTIVE SCISSOR SUPER COUPON

6 TON HEAVY DUTY STEEL JACK STANDS

Customer Rating
★★★★★



COMPARE TO
K TOOL
~~\$74.50~~
MODEL: KT161205

SAVE
53%
~~\$34.99~~
\$46.99

ITEM 38847/69596/62393/61197 shown



86757157

LIMIT 4 - Coupon valid through 6/15/19*

PITTSBURGH AUTOMOTIVE SCISSOR SUPER COUPON

2 PIECE 1500 LB. CAPACITY VEHICLE DOLLIES

Customer Rating
★★★★★



SAVE
55%

COMPARE TO
ROUGHNECK
~~\$89.99~~
MODEL: 27918

NOW
~~\$54.99~~
\$39.99

ITEM 60343/67338 shown



86758121

LIMIT 4 - Coupon valid through 6/15/19*

AMES SCISSOR SUPER COUPON

12:1 INFRARED LASER THERMOMETER

Customer Rating
★★★★★



NEW
~~\$26.99~~

NOW
~~\$19.99~~
\$19.99

COMPARE TO
GENERAL
TOOLS
~~\$51.75~~
MODEL: IRT657

SAVE
61%
~~\$19.99~~

ITEM 64310/64626/63985 shown



86760298

LIMIT 7 - Coupon valid through 6/15/19*

PITTSBURGH SCISSOR SUPER COUPON

6" DIGITAL CALIPER

- Includes two 1.5V SR44 button cell batteries.



SAVE
66%
~~\$29.97~~
\$9.99

COMPARE TO
HUSKY
~~\$29.97~~
MODEL: 1467H

SAVE 66%

ITEM 63711/98563/61585/62387/47257 shown



86761453

LIMIT 8 - Coupon valid through 6/15/19*

WARRIOR SCISSOR SUPER COUPON

3 PIECE TITANIUM HIGH SPEED STEEL STEP BITS

Customer Rating
★★★★★



SAVE
85%
~~\$13.99~~

NOW
~~\$8.99~~
\$8.99

COMPARE TO
IRWIN
~~\$59.98~~
MODEL: 15504PKSM

SAVE 85%

ITEM 69087/60379/91616 shown



86762382

LIMIT 9 - Coupon valid through 6/15/19*

PITTSBURGH PRO SCISSOR SUPER COUPON

1/2" DRIVE 25" BREAKER BAR

- Chrome vanadium steel construction
- Head swivels 180°
- Polished finish



LIFETIME WARRANTY

NOW
~~\$13.99~~
\$8.99

COMPARE TO
DURALAST
~~\$21.99~~
MODEL: 72-121

SAVE
59%
~~\$21.99~~

ITEM 60819/67933 shown



56060180

LIMIT 9 - Coupon valid through 6/15/19*

PORTLAND SCISSOR SUPER COUPON

1750 PSI ELECTRIC PRESSURE WASHER

- 1.3 GPM
- Adjustable spray nozzle



NOW
~~\$99.99~~
\$79.99

Customer Rating
★★★★★

COMPARE TO
BRIGGS &
STRATTON
~~\$174.44~~
MODEL: 20600

SAVE \$94

ITEM 63255/63254 shown



56060393

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1" x 25 FT. TAPE MEASURE

- Thumb Lock
- Rubber Wrapped Case

COMPARE TO KOMELO \$6.98
MODEL: L4825HV

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SUPER COUPON

30", 5 DRAWER MECHANIC'S CARTS

- 15,000 cu. in. of storage
- 700 lb. capacity
- Weights 139 lbs.

Customer Rating ★★★★★

NEW

YOUR CHOICE OF COLOR \$189.99

\$219.99

6 FANTASTIC COLORS

SAVE \$620

COMPARE TO Snap-on BLUE-POINT MODEL: KRBC10TBPS \$810

ITEM 63098/60497/61899/63095/63096/63097/93888 shown

86767759

LIMIT 3 - Coupon valid through 6/15/19*

CENTRAL PNEUMATIC

SUPER COUPON

HIGH SPEED METAL AIR SAW

Zip through sheet metal as thick as 16 gauge
Cuts rods, pipes and bars with speed and efficiency

NOW \$14.99

COMPARE TO IRONTON \$59.99

SAVE 75%

\$19.99

ITEM 62541/91753 shown

86768720

LIMIT 6 - Coupon valid through 6/15/19*

PITTSBURGH

SUPER COUPON

RAPID PUMP® 3 TON STEEL HEAVY DUTY LOW PROFILE FLOOR JACK

- Weights 73 lbs.

Customer Rating ★★★★★

NOW \$179.99

SAVE \$70

COMPARE TO TEQ \$149.99
MODEL: T8300182

ITEM 64264/64266/64879/64881/61282/68049/62326/61253 shown

56060609

LIMIT 5 - Coupon valid through 6/15/19*

HaulMaster

SUPER COUPON

18" x 12" MOVER'S DOLLY

- 1000 lb. capacity

Customer Rating ★★★★★

NOW \$7.99

SAVE 54%

COMPARE TO BUFFALO TOOLS \$17.65
MODEL: H0FDOLLY

ITEM 63098/60497/61899/63095/63096/63097/93888 shown

86768831

LIMIT 9 - Coupon valid through 6/15/19*

KRAUSE & BECKER

SUPER COUPON

AIRLESS PAINT SPRAYER KIT

Customer Rating ★★★★★

NOW \$169.99

\$214.99

COMPARE TO GRACO \$299

SAVE \$129

MODEL: 262800

ITEM 68001/62915/60600 shown

86771267

LIMIT 4 - Coupon valid through 6/15/19*

SUPER COUPON

4 PIECE ANTI-FATIGUE FOAM MAT SET

- Each pad measures 25" x 25"

Customer Rating ★★★★★

NOW \$6.99

\$8.99

SAVE 65%

COMPARE TO NORSK \$19.99
MODEL: 00119346

ITEM 40187/61607/62389/94635 shown

86773345

LIMIT 8 - Coupon valid through 6/15/19*

Grant's

SUPER COUPON

12" x 12" MICROFIBER CLEANING CLOTHS - PACK OF 12

Customer Rating ★★★★★

NOW \$4.99

\$7.99

SAVE 66%

COMPARE TO PEAK \$14.99
MODEL: PKCOFY

ITEM 63357/63361/63362 shown

86778722

LIMIT 3 - Coupon valid through 6/15/19*

CENTRAL MACHINERY

SUPER COUPON

4" x 36" BELT/6" DISC SANDER

Customer Rating ★★★★★

NOW \$64.99

\$74.99

SAVE \$54

COMPARE TO RYOBI \$119
MODEL: BD4601G

ITEM 64778/97181 shown

86780726

LIMIT 5 - Coupon valid through 6/15/19*

PITTSBURGH

SUPER COUPON

DIRT BIKE STAND

Customer Rating ★★★★★

- 1000 lb. capacity

NOW \$19.99

\$29.99

COMPARE TO BLACK WIDOW \$49.99

SAVE 60%

MODEL: MX-STAND-ALUM-LITE

ITEM 67151

86780804

LIMIT 6 - Coupon valid through 6/15/19*

PREDATOR

SUPER COUPON

8750 MAX. STARTING/7000 RUNNING WATTS 13 HP (420 CC) GAS GENERATOR

Customer Rating ★★★★★

ITEM 63086/68530/56169/56171/63085 shown

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CALIFORNIA ONLY

- GFCI outlets

Wheel kit and battery sold separately.

NOW \$599.99

\$529.99

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COMPARE TO HONDA \$2,599
MODEL: EB6500X1AT

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CENTRAL MACHINERY

SUPER COUPON

20 TON SHOP PRESS

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2.4" COLOR LCD DIGITAL INSPECTION CAMERA

Customer Rating ★★★★★

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SUPER COUPON

36" METAL BRAKE WITH STAND

Customer Rating ★★★★★

SAVE \$90

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SUPER COUPON

TWO TIER EASY-STORE STEP LADDER

Customer Rating ★★★★★

- 225 lb. capacity

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MODEL: S322A-1

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BRAUN

SUPER COUPON

390 LUMENS MAGNETIC SLIM BAR LED WORK LIGHT

Customer Rating ★★★★★

NOW \$24.99

\$33.99

COMPARE TO ASTRO \$55.12

SAVE 54%

MODEL: 40SL

ITEM 56248/56329/63958 shown

56063643

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SUPER COUPON

HEAVY DUTY FOLDABLE ALUMINUM SPORTS CHAIR

NOW \$19.99

\$27.99

SAVE 60%

\$49.99

COMPARE TO COLEMAN MODEL: 2000020293

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86791111

LIMIT 7 - Coupon valid through 6/15/19*

PITTSBURGH

SUPER COUPON

MULTI-USE TRANSFER PUMP

Customer Rating ★★★★★

NOW \$4.99

\$6.99

COMPARE TO SHOP CRAFT \$14.99

SAVE 66%

MODEL: 36667

ITEM 63144/61364/62961/63591/66418 shown

86796341

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CENTRAL PNEUMATIC

SUPER COUPON

3/8" x 50 FT. RETRACTABLE AIR HOSE REEL

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SAVE \$39

MODEL: SGY-AIR184

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HEAVY DUTY BATTERIES

PACK OF 24

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YOUR CHOICE

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61675 shown

AAA
ITEM 61677
61273/68377

\$778
VALUE

86804528

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SCISSOR SUPER COUPON

PREDATOR BEATS HONDA

Customer Rating ★★★★★

212 CC OHV HORIZONTAL SHAFT GAS ENGINE

212 cc	DISPLACEMENT	196 cc
6.1 HP	POWER	5.5 HP
9.7 FT. LBS.	TORQUE	9.1 FT. LBS.
37.5 LBS.	WEIGHT	40 LBS.
YES	LOW OIL SENSOR	YES

NOW \$9999

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ITEM 69727 shown

CALIFORNIA ONLY

SAVE \$230

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LIMIT 3 - Coupon valid through 6/15/19*

*HONDA GX200UT2QX2 stated specs

HONDA GX200UT2QX2

SCISSOR SUPER COUPON

ZURICH

OBD2 CODE READER WITH ABS ZR11

Customer Rating ★★★★★

NOW \$12999

SAVE \$20

\$14999

ITEM 63807

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SCISSOR SUPER COUPON

CENTRAL PNEUMATIC

3 GALLON, 100 PSI OIL-FREE AIR COMPRESSORS

Customer Rating ★★★★★

A. HOT DOG
ITEM 69269/97080 shown

B. PANCAKE
ITEM 61615/60637
95275 shown

YOUR CHOICE

\$3999

SAVE 59%

\$5699

COMPARE TO PORTER-CABLE MODEL: PCFP02003

86808580

LIMIT 5 - Coupon valid through 6/15/19*

SCISSOR SUPER COUPON

CENTRAL PNEUMATIC

1/4" AIR ANGLE DIE GRINDER

Customer Rating ★★★★★

NOW \$999

COMPARE TO HUSKY \$4998

MODEL: H4230C

SAVE 80%

\$1399

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56064880

LIMIT 8 - Coupon valid through 6/15/19*

SCISSOR SUPER COUPON

BADLAND

2500 LB. ELECTRIC WINCH WITH WIRELESS REMOTE CONTROL

- Weights 14.3 lbs.
- 11-1/8" L x 4-1/2" H

SAVE \$140

Customer Rating ★★★★★

\$18999

MODEL: 1125220

Voted Best Winches

\$6999

NOW \$4999

ITEM 68146/61297/63476/61840 shown

86809234

LIMIT 3 - Coupon valid through 6/15/19*

SCISSOR SUPER COUPON

PITTSBURGH

9 PIECE, 1/4", 3/8" AND 1/2" DRIVE WOBBLE SOCKET EXTENSION SET

LIFETIME WARRANTY

Customer Rating ★★★★★

NOW \$999

\$1499

ITEM 61278/67971 shown

86810408

LIMIT 9 - Coupon valid through 6/15/19*

SCISSOR SUPER COUPON

HaulMaster

4000 LB. CAPACITY CABLE WINCH PULLER

Customer Rating ★★★★★

For dead loads only. Not for lifting.

NOW \$1499

COMPARE TO AMERICAN \$2488

MODEL: 18600

SAVE 39%

\$1999

ITEM 69854/63448/61964 shown

86810595

LIMIT 6 - Coupon valid through 6/15/19*

SCISSOR SUPER COUPON

CENTRAL MACHINERY

8", 5 SPEED BENCHTOP DRILL PRESS

Customer Rating ★★★★★

NOW \$5499

COMPARE TO BUFFALO BLACK \$11095

MODEL: DP5UL

\$6499

ITEM 62520/60238 shown

86819404

LIMIT 3 - Coupon valid through 6/15/19*

SCISSOR SUPER COUPON

STOREHOUSE

11" CABLE TIES PACK OF 100

Customer Rating ★★★★★

Item 34637 shown

SAVE 80%

\$299

YOUR CHOICE \$199

COMPARE TO UTILITECH MODEL: SGV-CT25

TYPE ITEM

BLACK 69405/60277/34637

WHITE 60266/34636/69404

86811179

LIMIT 8 - Coupon valid through 6/15/19*

SCISSOR SUPER COUPON

Bauer

20 VOLT LITHIUM CORDLESS 1/2" COMPACT DRILL/DRIVER KIT

- 450 in. lbs. of torque
- 1.5 amp hour battery
- Weights 3.4 lbs.

Customer Rating ★★★★★

SAVE \$39

NOW \$5999

COMPARE TO RYOBI \$99

MODEL: P1811

\$6999

ITEM 64754/63531 shown

16665622

LIMIT 3 - Coupon valid through 6/15/19*

SCISSOR SUPER COUPON

CHICAGO ELECTRIC POWER TOOLS

12" DUAL-BEVEL SLIDING COMPOUND MITER SAW • Laser guide

Customer Rating ★★★★★

NOW \$13999

\$18999

COMPARE TO RYOBI \$249

MODEL: TSS120L

SAVE \$109

Blade sold separately.

Customer Rating ★★★★★

ITEM 69684/61970/61969 shown

86818003

LIMIT 5 - Coupon valid through 6/15/19*

SCISSOR SUPER COUPON

PITTSBURGH AUTOMOTIVE

5 PIECE TRIM AND MOLDING TOOL SET

Customer Rating ★★★★★

NOW \$599

\$899

COMPARE TO OEM \$1799

MODEL: 25314

SAVE 66%

ITEM 64126/67021 shown

86811686

LIMIT 8 - Coupon valid through 6/15/19*

SCISSOR SUPER COUPON

CENTRAL PNEUMATIC

40 LB. CAPACITY FLOOR BLAST CABINET

Customer Rating ★★★★★

NOW \$13999

\$17999

Includes gun with ceramic nozzle, hose and gloves.

COMPARE TO SHOP TUFF \$24999

MODEL: 47187

SAVE \$110

Customer Rating ★★★★★

ITEM 62144/68893 shown

86812846

LIMIT 3 - Coupon valid through 6/15/19*

SCISSOR SUPER COUPON

BUNKER HILL SECURITY

WIRELESS SECURITY ALERT SYSTEM

Customer Rating ★★★★★

NOW \$999

\$1499

COMPARE TO FIRST ALERT \$2899

MODEL: SFA600

SAVE 65%

ITEM 61910/62447/93068 shown

86813195

LIMIT 9 - Coupon valid through 6/15/19*

SCISSOR SUPER COUPON

HaulMaster

2" x 20 FT. TOW STRAP • 2800 lb. working load

Customer Rating ★★★★★

NOW \$899

\$1199

COMPARE TO HIGHLAND \$1599

MODEL: 1018000

SAVE 43%

Not for lifting or pulling dead loads.

ITEM 60675/61943/36612 shown

86817070

LIMIT 8 - Coupon valid through 6/15/19*

SCISSOR SUPER COUPON

HaulMaster

HITCH RECEIVER MOUNT FOR WINCHES

Customer Rating ★★★★★

NOW \$3999

SAVE \$79

\$5499

COMPARE TO WARN \$11899

MODEL: WAR70919

ITEM 69106

86817267

LIMIT 3 - Coupon valid through 6/15/19*

SCISSOR SUPER COUPON

VOYAGER

12" TOOL BAG WITH 21 POCKETS

Customer Rating ★★★★★

SAVE 75%

Tools sold separately.

\$1998

COMPARE TO AWP \$899

MODEL: 3L-2216

NOW \$499

ITEM 38168/62163/62349/61467 shown

86817292

LIMIT 8 - Coupon valid through 6/15/19*

SCISSOR SUPER COUPON

PITTSBURGH AUTOMOTIVE

1000 LB. CAPACITY ENGINE STAND

Customer Rating ★★★★★

NOW \$4799

\$5999

COMPARE TO IRONTON \$8999

MODEL: 47033

SAVE 46%

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■ **MODIFIED**



BRINGING BACK THE NOISE

AFTER SEARCHING FOR YEARS, A FORMER RACER RECREATES HIS CHEVY II

WORDS AND PHOTOGRAPHY BY TERRY SHEA • HISTORICAL PHOTOGRAPHS PROVIDED BY DON MILLER



THE NEXT TIME SOMEONE SAYS, “You can’t go home again,” make sure you properly tell them off. And by properly tell them off, may we suggest not a one-fingered salute, but a smoking, screeching burnout that leaves twin strips of rubber bits all over their driveway?

Before Don Miller enjoyed an extraordinarily successful career as the head of Penske Racing—yes, *that* Penske Racing—he was a racer and hot-rodder in his own right, though his preferred form of racing didn’t involve any turning whatsoever.

“I grew up in Chicago and I was always around cars,” Don recalls. “My dad started me off real early, building a ’36 Ford roadster. It kind of evolved from there. And then I prepared my first race car, which was a Model A with a flathead V-8 in it. I went to the drag strip and found out that was something I really liked to do.” Though the flathead-powered Model A was only good for about 19 seconds through the quarter, Don, just 16 at the time, was hooked.

After a bunch of other cars and a few years working for Uncle Sam as a radar specialist in the Army, Don got together



ENGINE: Under the hood is a faithful recreation of the small-block gasser original from the Sixties, with a tunnel ram intake and a tube-frame front end.

INTERIOR: A six-point roll bar and a racing harness are appropriate on a car capable of mid-11-second quarter-miles, while the Long in-line shifter provides quick changes to the four-speed.



wheels forward as well as the front wheels. It was ridiculous that they never said anything about it. That's how racing goes."

Tired of racing for trophies, Don and his partner decided to go match racing, but on their own terms. Don was one of the founding members of the Midwest branch of the UDRA—the United Drag Racers Association, an organization that ultimately fielded different circuits for Super Stock, Funny Car, AA Dragsters, and Gassers, each with a 16-car match field, so that everybody got paid. It was a pretty good deal, but not enough for Don to quit his day job. Soon enough, that day job meant working for Roger Penske, the consummate professional of professional racing.

"It was time to move on, so I sold it," Don says of the original *Big Noise II*. The final evolution had the two-door sedan packed full with 502 cubic inches of big-block fury, enough juice to run 150 mph in the quarter, with consistent times in the 10.09 range, with a best in the 9.90s. "We built our own engines and we did everything ourselves, because we couldn't afford to do it anywhere else," Don says proudly.

Fast forward some 50 years. The original *Big Noise II* could not be found, despite Don putting out an APB

with a friend, Don Warren. The friends each had a car, but figured that, together, they could build one good car. The pair chose a '55 Chevy and Warren & Miller was born, with *Big Noise* the chosen moniker for the '55.

"We had that '55 Chevy and we ran it for several years," Don says. "We won a ridiculous number of races. I can't even remember. It started off as a modified 265. Then we went to a 283, then a 301, and then a 352, which was a stroked version of the 283. We ran that for quite a long time. Then we decided that we wanted to get further into drag racing, because both of us had jobs. I had children already. So, Don said, 'What we'll do is, we'll keep running this thing, and try to sell it, but we'll start building a Chevy II.'"

In 1963, the duo built a '62 Chevy

II, updated with a '63 grille. With a small-block Chevy under the hood, *Big Noise II* was entered into the factory experimental classes. They sold the original *Big Noise*, but kept the 352 for the newer car. "It was fairly successful, but we didn't win any big meets like we did with the '55," Don remembers.

As the F/X classes evolved into Funny Car, Warren & Miller, like plenty of other like-minded racers, found themselves lacking the funds to run such a program. So, *Big Noise II* became a gasser, and its evolution continued. "We started running it in C/Gas, sometimes D/Gas if we put a little bit of weight in it," Don says. "It just barely made it in. We kept moving the wheels. We had shortened up the wheelbase and pushed the rear



on it through his many connections. When nothing came back after trying for years, he knew it was time to recreate that Chevy II instead. Don found the ideal car at the Central Pennsylvania Auto Auction, a 1964 example that was in mid-project status and already had a small-block V-8 under the hood. "The guy had already radiused the rear wheel wells and everything," Don tells us. "I said, 'Hell, that's what we want

right there!' So, I worked out a deal with him. I bought that car and then we took it back to North Carolina and took it apart and started."

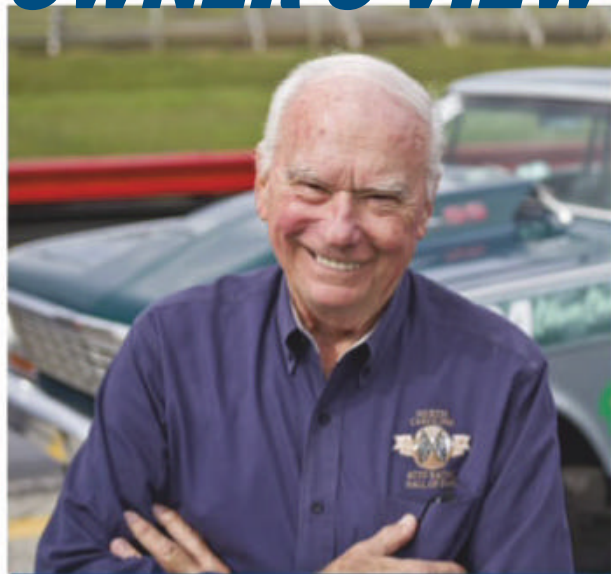
The entire project took about half a year, with Don even recruiting the original guys who assisted with the first *Big Noise II*. "The key thing to that whole deal," Don says, "is that the guy who painted the original Chevy II was Ray Tracy. He came down from

Michigan to work with this other friend of mine, who actually painted it in North Carolina. And the guy who did all the hand lettering on it, Kyle Harvey, was a guy I grew up with in Chicago. He had, about 10 years ago, moved to North Carolina." Getting the band back together to recreate the car proved a fairly easy task.

Today, the reinvented *Big Noise II* features a Firemist Green and Firemist



OWNER'S VIEW



This Chevy is kind of like a big trip to the past. I always liked the original car because it was fast and all of that, and we were really competitive, but it was like owning a boat, because every time you started the engine, you had to put more money in it.

It's not a boat anymore. I don't want it to be a boat. I want it to be a fun thing to do on a weekend that keeps your adrenaline pumping. I just want the thing to be reliable and something you don't have to spend all week working on just to run it on Sunday.

We went to a couple of the nostalgia races. It will run 11.50, 11.60 pretty regularly in the 120s. That's pretty good for an old man. —Don Miller

Silver two-tone paint scheme with an intricate lace pattern, a scheme almost identical to the original. The lace pattern idea came from Kyle, who lettered the car in the 1960s and again a few years back. "When we were back in Chicago," Don explains, "Kyle told Ray about it and Ray said, 'I could do that.' We went to the fabric store and we bought this material for a lace curtain. We took it, sectioned it, cut it to the exact size of the panels we were going to do. We painted the base color on the car and then laid up the lace and painted what color it was going to be—the car was that Firemist Green. And then we sprayed Firemist Silver over the lace and when it came out, the pattern was there." So successful was the effect the first time around that Don won multiple best of show trophies when he and Don entered the car in the World of Wheels show when it came to Chicago in the 1960s.

When it came to the powerplant for the recreation, Don decided to dial it back a bit, foregoing another monster big-block with the simple explanation of "I'm too old." Perhaps, but a built small-block V-8 that can still turn up the heat at the strip is another matter.

Starting with the small-block that

was already in the car, Don went through what he had and built the sort of stout, reliable machine he was looking for with the second iteration of *Big Noise II*. With a 0.030-inch over-bore bringing the cylinders to 4.030 inches and a stroker crank pushing that dimension to 3.75 inches, total displacement is 383 cubic inches, a common combination for a performance Chevy small-block these days.

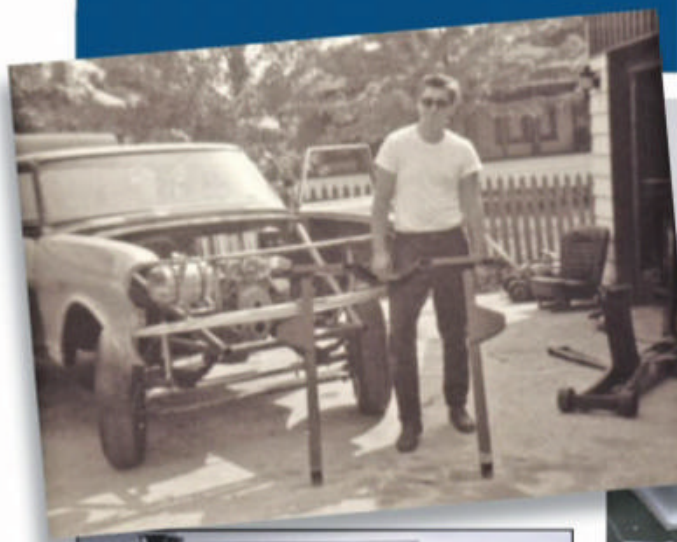
Forged pistons filled those cylinders and aluminum Air Flow Research heads, with 2.02-inch intake valves and 1.60-inch exhaust valves, top them. Don opted to equip the heads with steel rocker arms instead of aluminum because, "I don't want to be fixing it every time we run it." A Comp Cams grind measures an effective ½-inch of lift on those valves, and the compression ratio comes in at 12:1.

For induction, Don opted for a high-rise Edelbrock Pro Ram II tunnel-ram intake topped by a pair of Holley 660-cfm four-barrel carburetors. Custom headers into open pipes round out the breathing equation. The whole formula adds up to an engine that produces 485 horsepower and 490 pound-feet of torque.

All that twisting force gets to the rear wheels via a Jerico four-speed manual transmission with a dual-disc clutch. A Long in-line shifter makes for snappy changes of that Jerico gearbox. Final drive comes in the form of a Mopar-esque limited-slip Dana 60 with 5.30 gears, chosen for eighth-mile duty rather than the full quarter-mile.

A solid front axle with leaf springs features stock drum brakes mounting Cragar S/S 15 x 4.5-inch mag wheels with street radials. The solid rear axle features Mopar drum brakes, Calvert CalTracs traction bars and Calvert Split Mono-Leaf springs with much stickier Firestones mounted on Cragar S/S 15 x 10-inch mags. There is nary an anti-roll bar in sight.

The current car is a faithful reproduction of the original *Big Noise II* that Don Miller and Don Warren successfully campaigned in the Sixties, first in the Factory Experimental classes and later as a Gasser.



SPECIFICATIONS

1964 CHEVROLET CHEVY II

Inside, the standard seats remain—buckets in front and a bench in the rear. But Don has installed a six-point roll bar and a multi-point racing harness for safety. A tach atop the dash keeps him informed, as does a shift light, which helps with the quicker shifting required in eighth-mile racing. Before converting the car for the shorter distance, Don ran with 4.11s in the rear, turning quarter-mile times in the 11.50-second range at north of 120-mph trap speeds.

As with the original, the reincarnated *Big Noise II* has also made a splash on the show circuit, taking home the top trophy for competition cars at the Pinehurst Concours and later a second-place trophy for closed competition cars at the Trump National Charlotte Concours.

Don has faced some skepticism from his wife, who “tolerates” his return to racing, telling him he “is playing with fire.” Another long-time racer friend asked Don what he was going to do with the car. “‘I’m going to race it,’ I told him. He said, ‘But you’re almost 80!’ My reply, ‘So?’” As if a man needed a reason to go racing.

“Once you start doing it, it gets in your blood,” Don says, telling a story that any racer knows all too well. But, at his age, he adds, “Now, I don’t want to go 9 seconds.” The *Big Noise II* is about as personal as a modified muscle car can get, so taking it to shows and showing the tire smoke to competitors seems a pretty good time. “I like it just the way it is and the guys that started the project up in the Northeast, they did a nice job on what they did. I tried to continue on it and make it as nice as the old one was.” Mission accomplished. ■

ENGINE

Type.....	Chevrolet small-block cast-iron V-8
Cylinder heads	Air Flow Research aluminum alloy
Displacement	383-cu.in.
Bore x stroke	4.030 x 3.750 in
Compression ratio	12:1
Pistons	CRP, forged
Connecting rods.....	Lentz, steel
Horsepower @ rpm	485 @ unknown
Torque @ rpm	490 lb-ft @ unknown
Camshaft type.....	Competition Cams, solid lifters
Duration.....	Unknown
Lift	.500/.500-in intake/exhaust
Valvetrain	2.02/1.60-in intake/exhaust valves
Fuel	Edelbrock Pro Ram II intake manifold; 2 x Holley 660-cfm four-barrel carburetors
Lubrication	Stock
Ignition	MSD electronic
Exhaust	Custom-made tubular steel headers
Original engine.....	Unknown

TRANSMISSION

Type.....	Jerico four-speed manual; dual-disc clutch; Long in-line shifter
Ratios.....	Unknown

DIFFERENTIAL

Type.....	Dana 60 with limited slip
Ratio.....	5.30:1

STEERING

Type.....	Chevrolet Vega-type manual recirculating ball
Ratio.....	Unknown
Turns, lock-to-lock	Unknown

BRAKES

Front.....	Chevrolet 9.56-in drums
Rear	Mopar 10-in drums

SUSPENSION

Front.....	Nickey solid axle, leaf springs, tubular shock absorbers
Rear	Mopar Dana 60 solid axle, Calvert CalTracs traction bars, Calvert Split Mono-leaf springs, tubular shock absorbers

WHEELS & TIRES

Wheels	Cragar S/S alloys Front: 15 x 4.5 in Rear: 15 x 10 in
Tires	Front: Radial, 215/75R16 Rear: Firestone drag slicks, 8.20-15

PERFORMANCE

1/4-mile ET	11.50 sec @ 120 mph (est.)
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 **STOCK**



ACCIDENTALLY AUTOMATIC

A DEALER'S GOOF DIDN'T DETER A **HALF CENTURY OF OWNERSHIP**

WORDS AND PHOTOGRAPHY BY JEFF KOCH



I F YOU WANT TO DO SOMETHING RIGHT, either do it yourself or keep laser focus on those who are doing it for you. Leave it entirely to someone else, and they'll goof it all up. It's been a shade-tree mechanic's credo for decades, but it applies to other realms as well. Case in point: this Calypso Coral '70 Ford Mustang Mach 1.

Peter Lumia always had cool cars: "His first car was a '51 Hudson Hornet, the one that was winning all the NASCAR races in the early '50s," son Jim tells us as evidence. A Country Squire was employed for family related hauling and drudgery, but his own personal car was always a little more fun. In the fall of 1969, Peter traded in his first daily driven Mustang—a 289 four-speed notchback coupe, white with black gut and air conditioning—at Lakehurst Motors in Toms River, New Jersey, for a crack at a Calypso Coral Mach 1. "The new body came out in '69," Jim recalls, "but once he got a glimpse of the '70 models, he fell in love and ordered one."



INTERIOR: High-back Comfort-Weave vinyl bucket seats, faux-wood dash, door trim with lights, a clock, and the wood-look Rim-Blow steering wheel were all part of the Mach 1 package for 1970.

ENGINE: The original engine remains in the car after a quarter-million miles, though it still wears two-barrel Cleveland heads; a four-barrel carb and intake, and a Shaker scoop have been added.

And who could blame him? The Mach 1 package added considerable oomph to the basic Sportsroof Mustang. Standard engine was the 250-hp two-barrel 351-cu.in. V-8 with single pipe exhaust and three-speed manual transmission. But the visual spiffs were many: nonfunctional hood scoop with integral turn signal indicators; Competition Suspension; twin color-keyed door mirrors; vinyl high-back bucket seats and console; Rim-Blow steering wheel; bright exhaust tips; hood pins; E70-14 Wide-Oval whitewall tires; pop-open gas cap; honeycomb rear panel; special rocker panel moldings, stripes and Mach 1 badges; grille-mounted sport lamps; deep-dish wheel covers; wood dash; electric clock; bright pedals; NVH sound package; carpet runners; and molded door trim

panels with courtesy lights. Mach 1 was a popular choice for Mustang fans: A total of 40,970 Mach 1s were made in a production run of 197,045... more than 20 percent of all 1970 Mustang production, and just under half of all Sportsroof production for the year, was dedicated to the Mach 1.

Now, word on the street was that the high-flowing four-barrel heads were a little too aggressive for day-to-day driving—that the smaller chambers in the two-barrel heads were actually better suited to street duty. But that's not why Peter ordered his Cleveland-powered Mach as a two-barrel car. Feeding and clothing six kids means a paycheck needed to stretch. So, although Peter splurged for the snazzy Mach 1, he didn't go crazy on the order form.

"It was pretty basic," Jim says. "The only two options he ordered were air conditioning and a four-speed." Summers on the East Coast can get pretty swampy, so we're on board with the air conditioning. But we take a peek inside the cabin as it's parked in Jim's Mesa, Arizona, driveway, and we see a floor-shifted automatic poking up between the seats. So, what happened?

Someone else filled out the order

form, is what happened. "The car arrived in late 1969 with an automatic. Someone checked the wrong box. The dealer told him it would be another six weeks to reorder it with the stick. The car was sitting there; it had just come off the truck, and it looked so pretty."





Would Peter tell the goofballs at Lakehurst Motors to go pound sand down the shore? No. "Dad elected to take it rather than wait six more weeks." The accidental selection of the FMX automatic meant that the rear axle was an open 3.0 in a Ford 9-inch housing.

And it remained Peter's daily driver clear through 1988, when it had amassed more than 200,000 miles on the clock. If the lack of do-it-yourself gear selection was a disappointment to Peter, it never showed. "In the first five years he had that car, he put 90,000

miles on it," Jim recalls. "He drove the wheels off it! It was just nuts."

But in those two decades, Peter rarely drove his Mustang in anger. Although... "Dad was a private pilot, and every Saturday we'd go flying," Jim recalls. "And we always took the



OWNER'S VIEW

My whole childhood, all I ever thought about was owning my dad's Mustang. I got to experience growing up in it. Six, seven years old, changing oil with him and helping him wash it. We took it everywhere—vacations, camping, across the country, TSD rallies, the drag strip, and to the airport on Saturday mornings—all with my dad. I love the style of it, but most importantly the connection I have with it and my dad. He and I have a good connection, and he knew when he sold it to me that it would never go anywhere. It will probably be the last car I ever own.

—Jim Lumia



Mach. Coming home one Saturday, we were at a light beside a Heavy Chevy Chevelle making all kinds of racket. And it was the first time I ever saw him stand on it." While Peter one-wheel-peeled across the intersection, "the Chevelle walked away from us." Ah, well. Aggressive launches were few and far between, and it's probably one of the reasons why this Mach 1 has survived as long as it has.

Another reason? Leaving New Jersey for the greener (brownier?) pastures of the desert Southwest. "We moved in late 1970. That first winter in Toms River must have been mild. There's a picture of me next to the car that was taken in January of '70, and there's no snow on the ground. Road salt would not have been nice to that car at all."

Jim started gunning for his name on the title and the keys in his hands as soon as he got his license. But Peter did the math... and said no. "Back in the day, Dad realized that if I got my hands on it, it wouldn't have survived high school. I would have ruined it."

Jim was, however, allowed to rebuild the engine. It had well over 100,000 miles on the clock and was not quite equipped for unleaded

fuel, so Jim took the opportunity to wring a little more performance out of it. A new set of .030-inch-over TRW pistons maintained factory 9.5:1 compression, but a new aluminum Edelbrock Performer intake and a 650-cfm Holley 4150 four-barrel carburetor were swapped on.

At this point, Jim also selected a slightly hairier Comp Cams hydraulic flat-tappet camshaft—.484-inch lift, 260 degrees duration, 110-degree lobe separation—to take advantage of the better breathing. He also added electronic Pertronix control to the distributor. Jim ditched the factory single exhaust for a set of headers and 2½-inch dual pipes with Magnaflow mufflers. Jim estimates that the



Above, in the '80s, post engine rebuild. Right, young Jim Lumia plays air-traffic controller in this early-1970 photo of the then-new Mach, wearing its stock whitewalls and wheel covers



changes put 300 hp to the rear wheels, and he's pleased to report that the engine hasn't been back out of the car since its overhaul more than 35 years ago. (That's what happens when you do something right the first time.) Peter drove his Mach 1 daily for another five years with this revived setup, accumulating a total of 220,000 miles in the process.

"He just loved driving it," Jim recalls, "but when it started getting expensive to fix everything ... that's when I got the call." In the 30 years since, Jim has added just 1,000 miles per year, and you could be forgiven if you mistook it for a 50,000-mile car instead of one that's gone a quarter-million. The paint and striping are largely original—Jim estimates 70 percent of it was applied by the factory (it's not a higher number for reasons we'll get to shortly). You can see where half a century of vigorous polishing has worn through the paint in some spots, where a stripe is fading. It's not a perfect car. It was a driver, and to an extent it still is.

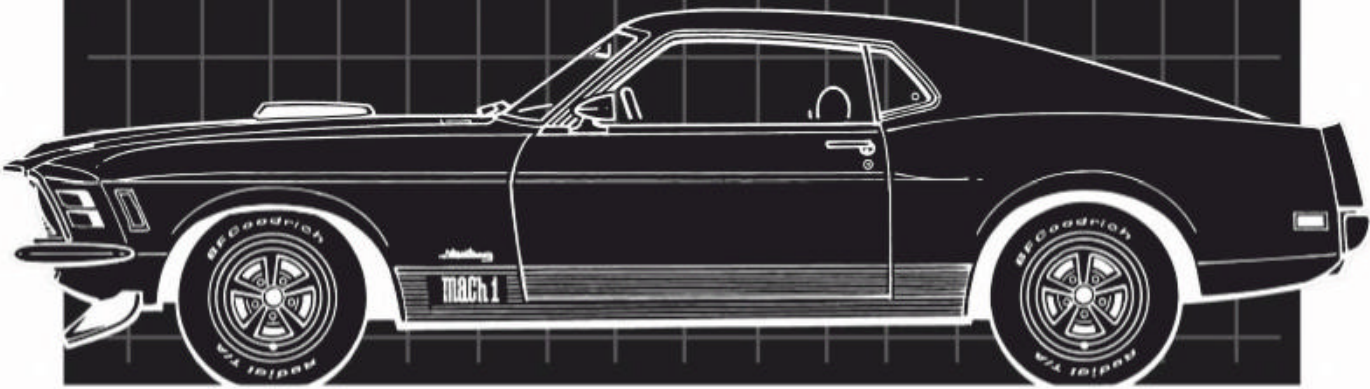
In the years since Jim took over ownership, he's quietly gone and made some modifications that make his dad's old Mach 1 a little more driveable in the modern age. He hasn't been back in the engine since it was rebuilt in '83, since he's still happy with the power. A Gear Vendors overdrive unit helps keep the revs down on sustained cruises. Fifteen-inch Magnum 500s and white-letter BFGoodrich rubber replaced the steelies and bias-belted whitewalls, for better traction.

"Within my first year of owning it, I freshened all of the suspension," Jim reports. "That's when I lowered it 2 inches," with a set of new coils in front and reverse-eye leaf springs in back. Koni shocks and a pair of anti-roll bars—a 1-inch Addco bar in front, a 5/8-inch Boss 302 bar in back replacing the factory 1/2-inch rear bar—help keep things planted.

The sharp-eyed among you may have spotted the Shaker hood scoop—an option on the Mach 1. Yeah, about that... "On my way to a car show," Jim says, "someone ran a red light. It was a low-impact crash, nothing structural, but the right front fender was

SPECIFICATIONS

ILLUSTRATION BY RUSSELL VON SAUERS



1970 FORD MUSTANG MACH 1

PRICE

Base price.....	\$3,271
Options on car profiled.....	Air conditioning (\$380); Cruise-O-Matic FMX three-speed automatic transmission (\$222)

ENGINE

Type.....	Ford 335-series "Cleveland" OHV V-8; cast-iron block and cylinder heads
Displacement	351-cu.in.
Bore x stroke	4.00 x 3.50 in (currently 4.03-in bore)
Compression ratio	9.5:1
Horsepower @ rpm	250 @ 5,400 (currently 300+ est)
Torque @ rpm	355 lb-ft @ 3,400
Valvetrain	Hydraulic valve lifters
Main bearings	Five
Fuel.....	Two-barrel Autolite/Motorcraft 2100/2150 carburetor (currently Holley 4150 650-cfm four-barrel carburetor)
Lubrication	Pressure; gear-type pump
Electrical.....	12 V
Ignition.....	Ford breaker-point distributor (currently fitted with Pertronix electronic conversion)
Exhaust.....	Single exhaust (currently dual 2½-inch exhaust with Magnaflow mufflers)

TRANSMISSION

Type.....	Ford FMX three-speed automatic
Ratios.....	1st/2.40:1 ... 2nd/1.47:1 ... 3rd/1.00:1

DIFFERENTIAL

Type.....	Ford 9-inch housing, open differential
Ratio.....	3.00:1

STEERING

Type.....	Recirculating ball
Ratio.....	25.45:1
Turning circle	37.6 ft

BRAKES

Type.....	Hydraulic; four-wheel manual 10-in drum
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SUSPENSION

Front.....	Independent, unequal-length control arms; anti-roll bar, coil springs, hydraulic shocks (currently Koni shocks)
Rear	Solid axle; semi-elliptic leaf springs; staggered hydraulic shocks (currently Koni shocks), anti-roll bar (currently 5/8-in)

WHEELS & TIRES

Wheels	Stamped steel disc, five-lug (currently Magnum 500) Front/Rear: 14 x 7 in (currently 15 x 7)
Tires	Firestone bias-belted whitewall Wide Oval (currently BFG Radial T/A white-letter) Front: E70-14 (currently 235/60R15) Rear: E70-14 (currently 255/60R15)

PRODUCTION

Ford built 197,045 Mustangs for 1970. A total of 40,970 of them were Mach 1 models.

PERFORMANCE

1/4-mile ET	N/A
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crunched, and the front bumper got tweaked. Years earlier, I'd purchased an NOS Shaker hood and a complete Shaker assembly, holding onto it with the idea of installing it if I ever pulled the trigger on a repaint. Since the front of the Mustang was being repaired anyway, I thought this would be the perfect opportunity to install the Shaker. I actually considered painting the whole car, but I was hesitant—it's only original once, they say. But the body shop convinced me that they

New styling for '70 moved the headlamps into the grille, replacing them with these fancy slats in the chamfered corners. Matte-black stripes reduce glare on the hood and look awesome.

could match the color—and they did, so they just did the front clip." The original hood remains strapped to his garage wall—more than just a cool piece of man-cave art.

And we are pleased to report that

while the Calypso Coral Mach 1 lives on in Jim's garage, 90-year-old Peter has gotten his mitts on a Mustang once again. "It's an '07 GT, white with black interior and a five-speed." The modern equivalent of the car Peter traded in for the Mach 1. The Lumias have yet to run side-by-side in their Mustangs on the quiet piece of freeway near Jim's home and drop the hammer. "He does get into it, though," Jim notes. "Last time he visited, he broke the tires loose in front of the house as he left." ■





JUNE 22 - 30, 2019

SATURDAY, JUNE 22

START: Mission Inn Ave, Riverside, CA - 9 a.m. to 1 p.m.
LUNCH: California Route 66 Museum, Victorville, CA - noon
OVERNIGHT: The Boulevard, Lancaster, CA - 4:30 p.m.

SUNDAY, JUNE 23

LUNCH: Bishop City Park, Bishop, CA - noon
OVERNIGHT: Lampe Park, Gardnerville, NV - 5:30 p.m.

MONDAY, JUNE 24

LUNCH: Mill Street, Grass Valley, CA - 11:45 a.m.
PIT STOP: State Theater, Myers Street, Oroville, CA - 2:30 p.m.
OVERNIGHT: City Plaza, Downtown Chico, CA - 5 p.m.

TUESDAY, JUNE 25

LUNCH: Recreation Grove Park, Willits, CA - 12:15 p.m.
OVERNIGHT: 2nd Street, Old Town, Eureka, CA - 5:15 p.m.

WEDNESDAY, JUNE 26

LUNCH: Curry County Fairgrounds, Gold Beach, OR - noon
OVERNIGHT: Southwest G Street, Grants Pass, OR - 5 p.m.

THURSDAY, JUNE 27

LUNCH: Rim Village, Crater Lake, OR - noon
OVERNIGHT: Tower Theater, Wall Street, Bend, OR - 5 p.m.

FRIDAY, JUNE 28

LUNCH: Aeroplane & Auto Museum, Hood River, OR - noon
OVERNIGHT: Fort Vancouver, Vancouver, WA - 5 p.m.

SATURDAY, JUNE 29

PIT STOP: Maritime Museum, Astoria, OR - 10 a.m.
LUNCH: Commerce Avenue, Longview, WA - noon
OVERNIGHT: LeMay Family Collection, Spanaway, WA - 5:15 p.m.

SUNDAY, JUNE 30

FINISH: LeMay - America's Car Museum, Tacoma, WA - 1:30 p.m.

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■ ON LOCATION



A PICNIC OF POWER

SPECIAL MUSCLE CARS CELEBRATE AT BEECH BEND

WORDS AND PHOTOGRAPHY BY CHUCK HANSON





Russell Small loves to show what his '69 Hurst/Olds survivor is capable of, and had little difficulty progressing to the semi-finals.

IT WAS A QUIET, TRANQUIL MORNING when we cruised the tree-covered lane that leads to Beech Bend Raceway. On a beautiful Friday in mid-July, the peaceful surroundings belied the explosiveness that would soon assault every one of our senses. As soon as we entered the gates to the track, the visceral barrage began.

The unfettered roar of high-powered engines was the first to reach us, accompanied by the sweet perfume of combusted high-octane race fuel. As we made the last turn into the pit area, we finally saw the source of all the commotion, and the objects of our affections. We had arrived at Supercar Reunion 21 thinking we were early enough to get a jump on things, but several of the participants already had their hoods up to prepare for the day's battle on the legendary track. Others were unloading their mechanical monsters and unloading the contents of their trailers into the warm Kentucky sunshine in Bowling Green. Ooooooh, was this gonna be good!

Over barbecue and a few brews the night before, bench racing went well into the wee hours as the stage was set for the day's competition. Participants compared notes on improvements completed beforehand, while others broke out their newest acquisitions for fellow gearheads to enjoy and speculate about.

What began as a gathering of mostly Chevy, max-powered muscle cars some 20 years ago has become a great get-together for muscle machines of all brands, shapes, and sizes. In fact, to encourage competition and participation from all corners of the muscle car spectrum, even late-model muscle is a fairly common sight at the event; after all, they are very likely the classic supercars of tomorrow.

But while the on-track competition is stiff, the camaraderie that pervades the event is what truly makes the Supercar Reunion special. The common appreciation for the mechanical mayhem unleashed by Detroit during the muscle car era is a catalyst that cuts across all brand preferences and unites everyone in a celebration of horsepower and panache.

The winner of this year's on-track competition was Andy Snetselaar, whose replica of the Platt & Payne Cobra Jet Mustang waded through a field of competitors laced heavily with Chevys. In the final round, the Ankeny, Iowa, resident found himself lined up against the formidable 455-urged Firebird of Lane Dailey, who brought his powerful Poncho from Zanesville, Ohio. But Dailey's Pontiac suffered a mechanical malfunction at the big end of the track and conceded to Snetselaar's winning 11.38 at 118 mph. Conspicuous by their absence, however, were Mopars of any kind. Maybe next year...

So, if you're making plans to attend automotive events in 2019, the Supercar Reunion is well worth adding to the schedule. Seeing classic muscle competing on a legendary, vintage racetrack and meeting the fine folks who perpetuate our passion just might be the highlight of your summer. For more information and to get registered for the mid-July event, visit www.facebook.com/Supercar-Reunion. We hope to see you there!



FATHER KNOWS BEST

Kennedy Patrick was practically born with a 9/16 wrench in her hand. The 21-year-old Kentucky marketing major had accompanied her dad to the drag strip for as long as she could remember. So, when he replaced the wheezy small-block in her '69 Chevelle two-door "post" with a 454 big-block, it

was only a matter of time before she put it to the test on the drag strip. SCR21 was the time and place for her to transfer all she'd learned by watching into practical application. She recorded a best of 15.90 before good ol' dad took her to school with a hole shot that ended her studies for the day.



Reunion festivities kick off with a Thursday evening barbecue prepared by SCR participant Jason Ball, and sponsored by MASCAR Classics.



The diversity and scope of the event is exemplified in this matchup of classic '69 Z/28 muscle versus a 2017 ZL-1 Camaro future classic supercar.



Jason Ball with his '69 COPO Camaro proves that he can cook on the drag strip just as well as in the barbecue pit by running 13.10s. The '69 Nova belonging to Adam Byers knocked down consistent 12.0 runs.



By prevailing over the competition with his Platt & Payne Cobra Jet Mustang replica, Andy Snetselaar was presented with a trophy for his accomplishments by event organizer, Doug Perry.



Dick Harrell Camaros are a rare sight, so seeing this unrestored example tearing up the drag strip at SCR21 was an unexpected and amazing surprise. Owner Dave Beem added the rare F-body to his burgeoning COPO collection after purchasing it outside Kansas City, not far from Harrell's original performance shop.



Don't let the demure appearance of Chad Calder's '66 Chevy II fool ya. The small-block screamer clicked off 11-teens all day long.



What better way to spend the day than watching the age-old Ford versus Chevy battle for drag-strip supremacy?

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Event organizer Doug Perry heats the hides on his '69 COPO Camaro in search of a solid time slip. He was rewarded with an 11.09 at 122 mph.



Legendary automotive scribe, and *HMM* contributor, Bob McClurg recounted many of his automotive journalistic exploits as he introduced (roasted) the SCR Man of the Year, Kim Howie (seated).



The '69 COPO Chevelle belongs to Al Galdi, who coaxed his impeccable restoration to low 14s at 100 mph.



Saturday was a laid-back day with muscle machines on display both inside and outside of the National Corvette Museum. Museum visitors that knew nothing of the gathering were pleasantly surprised by the quality and quantity of non-Corvettes found there.



We spotted this rare, hood scoop-mounted tach on the '70 Yenko Deuce displayed by Schoenthaler Restoration, a shop that specializes in the LT-1-powered Novas.

E-MOTION-AL RESCUE

When the discussion turns to tuner-built muscle machines, Motion Performance holds a solid place in the conversation. This '71 Phase III Camaro is the proud possession of Ohio resident Mark Hassett and features the legendary LS7 454 as its centerpiece. Maintained in immaculate condition, the Camaro still sports its original paint, interior, and performance hardware.



The LS7 benefitted further from the addition of an Edelbrock intake, Holley carb, Hooker headers, Accel ignition, and of course, a Motion super tune.



Mechanical issues kept the rare Motion Camaro off the track, but we were still grateful to be able to check it out in person while it was parked in the pits.

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After the banquet, bench racing began in earnest as Ken Barnhart (far right) and local NHRA Stock and Super Stock legend Dickie Ogle (blue shirt) swapped stories and jarred each other's memories about races, racetracks, and racers they've known through the years.



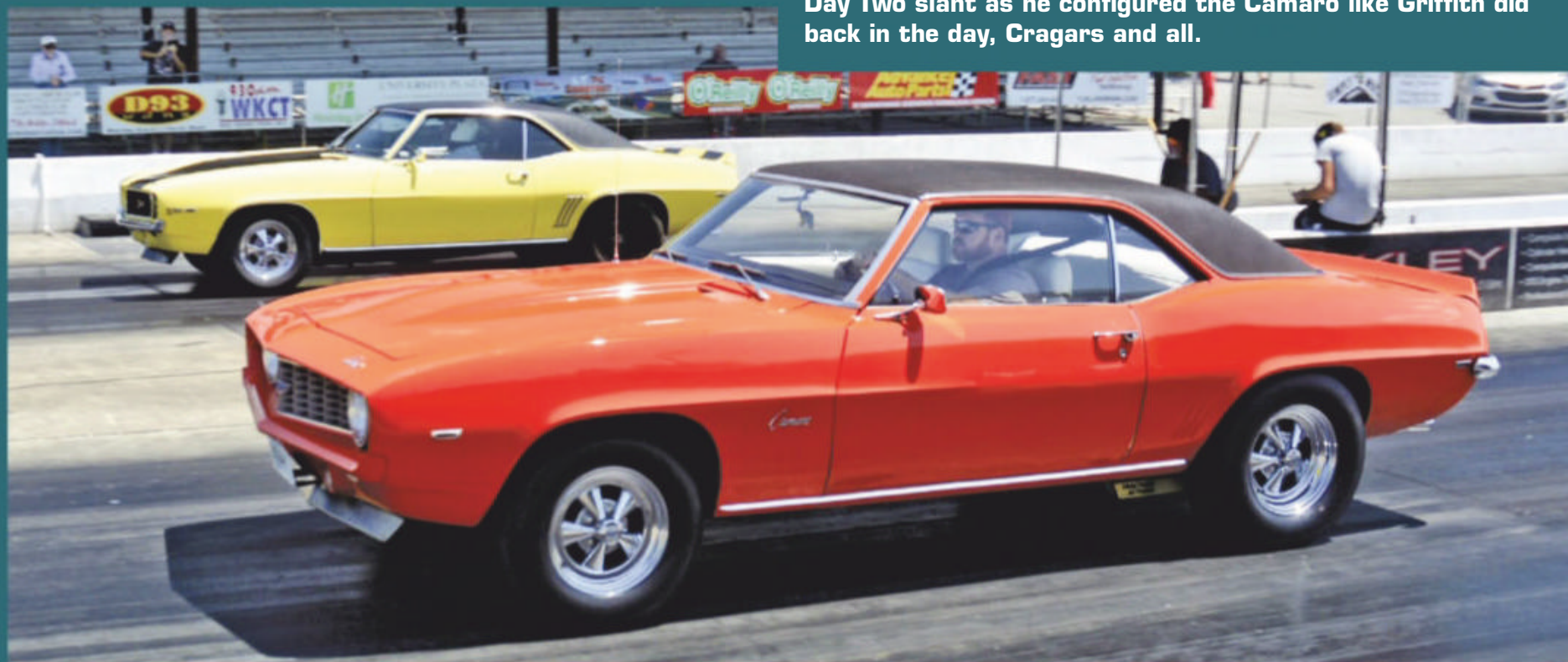
The awards banquet is held Friday evening at the nearby National Corvette Museum. Iconic muscle is on full display after the day's battle on the strip.

REUNION AT THE REUNION

It had been more than 40 years since David Griffith last saw his orange '69 COPO Camaro. In the interim, the Camaro passed through numerous owners before Kasey Alford laid claim to it. Alford promptly set about restoring it to its original glory, and invited Griffith to attend its debut at SCR21. "I didn't know what to expect," David says after making the drive from southern Georgia. "But once I met Kasey, I knew my ol' Camaro was in good hands. Seeing it and riding in it again sure brought back a lot of good memories, and it was like seeing an old friend again." What better way to celebrate a reunion at a reunion than by seeing an old friend in the possession of a new friend?



David Griffith (right) and Kasey Alford share a passion for Griffith's '69 COPO Camaro. Alford's restoration took on a Day Two slant as he configured the Camaro like Griffith did back in the day, Cragars and all.



To prove that the old Camaro still had it, Alford sent it down the track several times where it posted 13.20s at over 106 mph.

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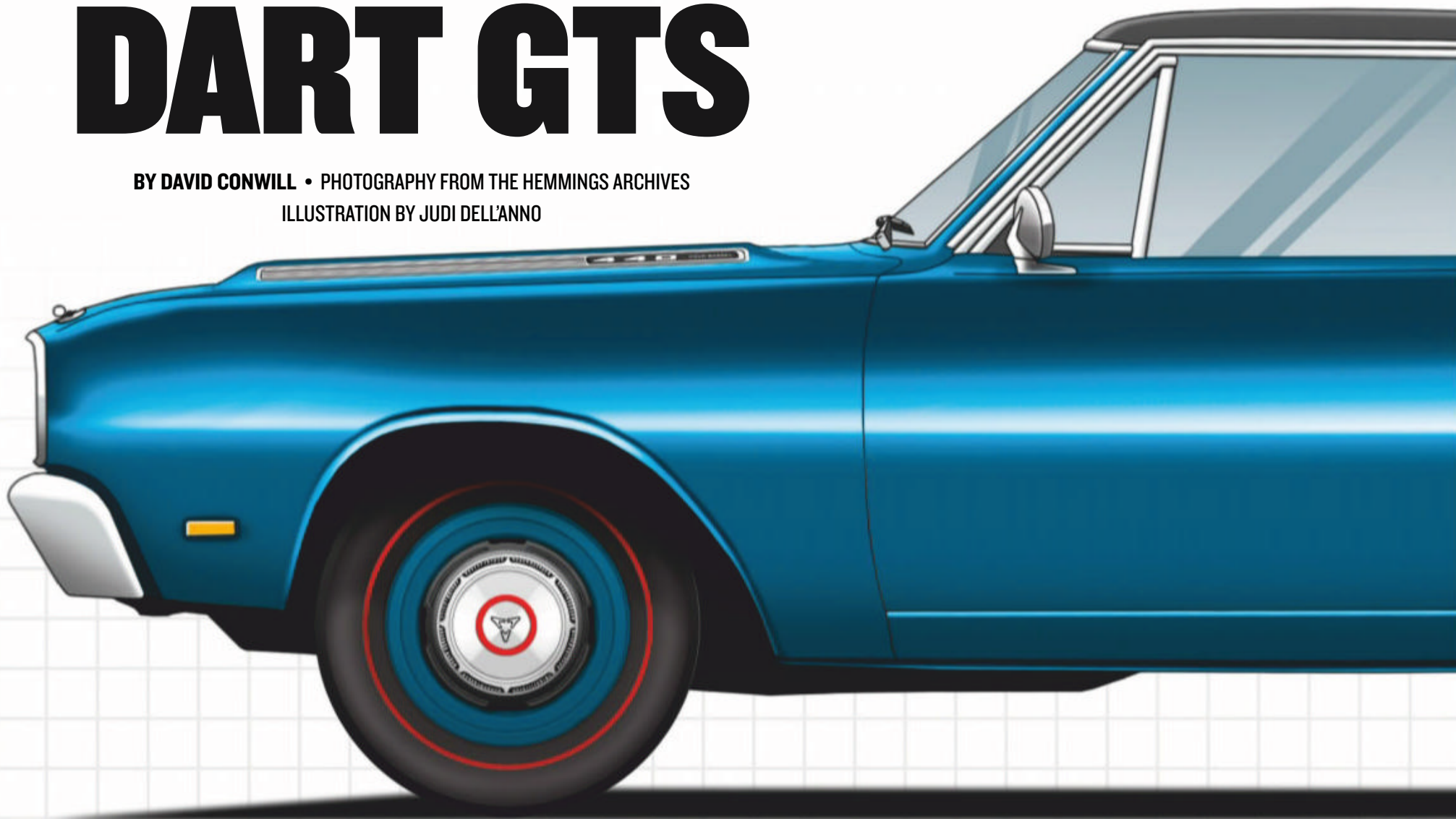
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1969 DODGE DART GTS

BY DAVID CONWILL • PHOTOGRAPHY FROM THE HEMMINGS ARCHIVES
ILLUSTRATION BY JUDI DELL'ANNO



ENGINE

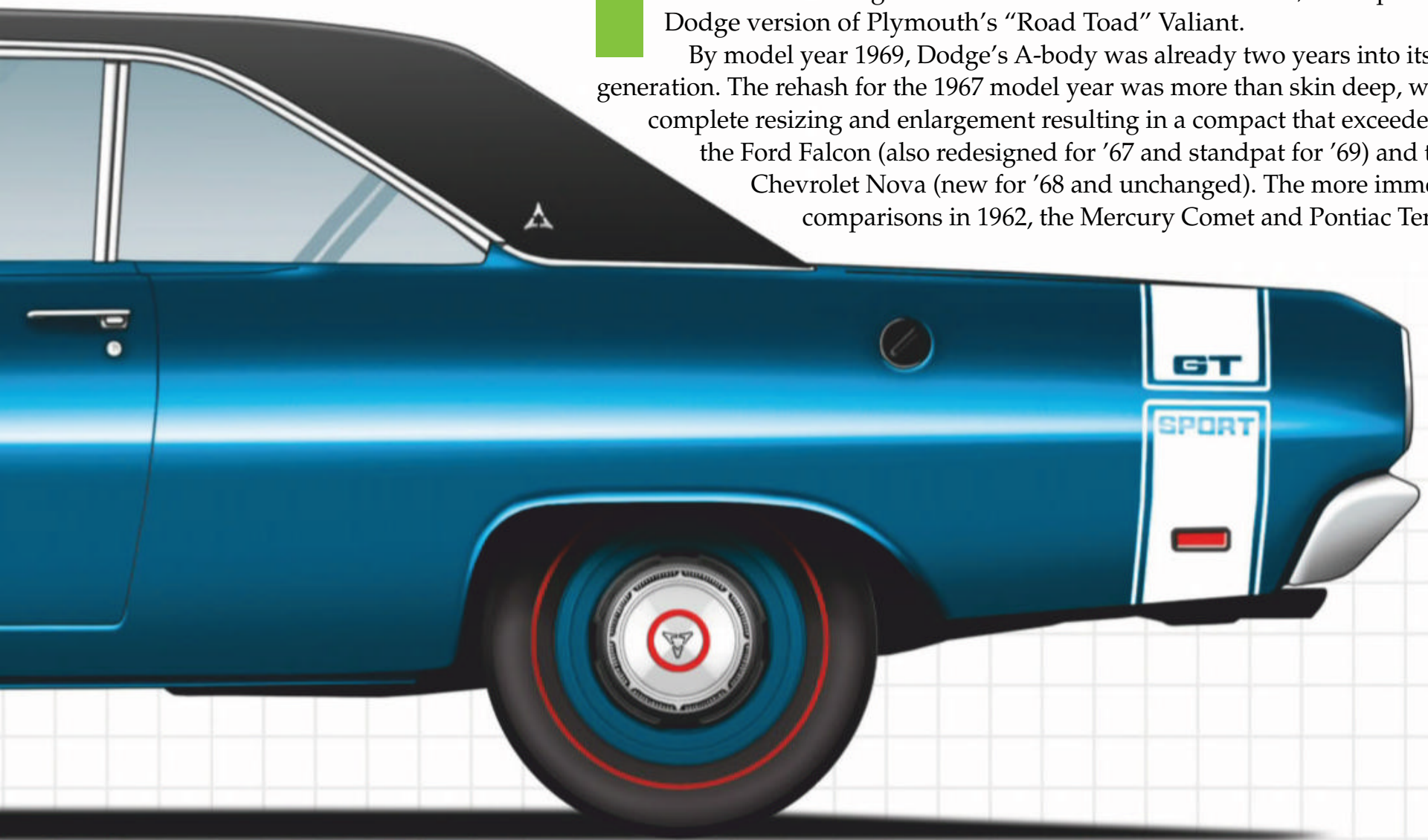
The base engine in the 1969 Dodge Dart GTS was the 340-cu.in. LA-series small-block V-8. Dodge literature bragged that this engine “cuts 2 seconds off the 0-60 time, and 5.6 seconds off the 50-70 time of the old 273 4-barrel.” It featured a forged crankshaft, four-barrel carb, and 10.5:1 compression. The 340 was rated at 275 hp. The optional engine, available only in the GTS, was a 10:1-compression-ratio, 330-hp 383 B-series big-block. Those “in the know” could go beyond the factory literature and obtain one of the limited number of 440-powered GTSes, which resulted in the installation of a 375-hp engine, also with 10:1 compression. Opting for the 440 meant power brakes, disc brakes, and a four-speed were all off the table. Only 340 cars could get air conditioning.

TRANSMISSION

Two transmissions were available in the Dart GTS, but were limited based on what engine was selected. Both put power to a Chrysler 8.75-inch rear axle with optional Sure-Grip limited slip. There was no A-body-sized Dana 60 available. The 340 could have a column-shifted TorqueFlite three-speed automatic, a floor-shifted TorqueFlite (if the console was optioned), or Chrysler's tough A-833 four-speed manual. The manual trans and floor-shift TorqueFlite were also available with the 383, the latter making the console a mandatory option. Cars built with the 440 were available only with the floor-shifted automatic and the console.

INTERIOR

Head rests started the model year as options but became mandatory in January 1969, in response to Federal regulations. All GT and GTS hardtops received full-foam, all-vinyl bucket seats (vinyl bench seats, in black, blue, red, or white, were standard in the convertible, but the buckets were an option). A console was an additional extra—ordering TorqueFlite without the console meant you got column shift, except in automatic-equipped big-block cars, where the floor shift and console were mandatory. Tachometers were only available in cars that also received a console. Upholstery colors were gold, blue, green, red, black, and white. Carpet matched the seat color except when white seats were specified, in which case buyers could have blue, green, black, or gold carpet (though this last color was not available in convertibles, and a convertible buyer who opted for the white bench automatically got black carpet). A three-spoke steering wheel with partial horn ring was standard, and a full horn ring or a woodgrain wheel rim were optional extras.



F STUFFING A 421

into a lightweight Tempest for A/FX competition was the genesis of the GTO, then surely the 1969 Dodge Dart GTS was the grandchild of the 1962 Golden Lancer, a 413-powered Dodge version of Plymouth's "Road Toad" Valiant.

By model year 1969, Dodge's A-body was already two years into its third generation. The rehash for the 1967 model year was more than skin deep, with a complete resizing and enlargement resulting in a compact that exceeded both the Ford Falcon (also redesigned for '67 and standpat for '69) and the Chevrolet Nova (new for '68 and unchanged). The more immediate comparisons in 1962, the Mercury Comet and Pontiac Tempest,

CHASSIS

"Firm-ride" shock absorbers and Rallye front and rear suspension (with front anti-roll bar) were standard on the GTS (and Swinger 340). Drum brakes on V-8 Darts were the same regardless of engine selection: 10 x 2.25 inches up front, 10 x 1.75 inches in the rear, both with bonded linings. Selecting the optional front discs, which came with the same 10 x 1.75 rear drums, meant you also got power assist. Lack of room for a brake booster meant that the 440 cars only came with manual drum brakes. All GTs and GTSes received 14-inch wheels, and a pressed steel wheel with a center cap was standard with two types of wheel cover optional (including a "Deep-Dish" cover that fit only the 14 x 5.5-inch wheel). Also available was the notorious "cast 14-inch road wheel," a stylish mag-like wheel that proved to be flawed and was recalled and replaced in September 1968 (See *Hemmings Motor News*, May 2007).

BODY

Both convertible and hardtop body styles were offered. To differentiate the GT from lesser Darts, that series omitted the chrome side molding and got a blacked-out grille with a horizontal center divider bar. To that the GTS added a power bulge hood, bumblebee tail stripe, and dual exhaust—all elements shared with the Swinger 340. Darts were available in red, cream, yellow, black, and white, and light-brown, light-green, medium-green, dark-green, gold, copper, bright-turquoise, light-blue, medium-blue, and bright-blue metallics.

PRODUCTION

Dodge built 191,000 Darts for the 1969 model year, of which 6,700 were GTS hardtops and convertibles. No breakdown by body style or engine is available within the Dart GTS series. A mere 640 cars were built with 440 power—assembly of which was handled by Hurst-Campbell rather than Dodge itself. The 440-powered GTS concept originated with Mr. Norm's Grand Spaulding Dodge in Chicago, which built its own examples in 1968. The Mr. Norm team assisted with the design work on the "production" versions for 1969—which were about as production as a Hurst/Olds or SC/Rambler. Factories producing Darts included the historic "Dodge Main" plant in Hamtramck, Michigan, and Los Angeles. The California plant furnished the majority of cars for California and the Southwest, but was rumored to have quality-control problems.



had both moved upmarket into intermediate territory where they and their offspring (Cyclone and GTO) did battle with the Dodge Super Bee, Coronet, and Charger.

When the Dart name first replaced the Lancer badge for 1963, the compact came in three trim levels: 170, 270, and GT. The GT version was initially only about trim (the name probably only justified by the bucket seats), with both standard and optional powerplants limited to Slant Six varieties. A V-8 became available for 1964, the new LA-series small-block, in 273-cu.in., helping GT versions match Plymouth's sportier Barracuda pony car.

The Challenger was still one model year in the future in 1969, so a luxe/high-performance version of the Dart, called the GTS, was called on to match the Mercury Cougar and Pontiac Firebird. A budget-performer Dart, called the Swinger 340, is another desirable variety, but warrants a separate Buyer's Guide.

The GTS was a submodel of the GT line. All GTs received a special blacked-out grille with, in '68 only, a center horizontal divider. To this, the GTS added E70-14 redline tires on 14 x 5.5-inch wheels, a three-spoke steering wheel, dual exhaust, carpet, an engine dress-up kit, a "power-bulge" hood, and a bumblebee stripe across the trunk lid and body sides. The power-bulge hood and bumblebee tail stripe were shared

with the Swinger 340. The overall effect was subtle, much like the original 1964 GTO. It was clear this was a sporting version of a compact—the last generation of the original muscle-car concept before everything started to ape the styling of the pony cars.

In fact, the comparison of the GTS with the original GTO is irresistible. The "compact" GTS is only 21 pounds lighter than the "intermediate" GTO, and the wheelbase is 4 inches shorter. The E70-14 redlines on the GTS are a little smaller than the 7.50-14 redlines on the GTO. The optional Tri-Power 389 on the GTO was rated at 330 hp, while the optional 383 on the GTS came in at 335 hp. Thanks to the generous size of Chrysler products in this era, the factory had hit upon a pretty classic muscle-car combination.

The easiest way to confirm you're looking at a factory-built GTS is to check the Vehicle Identification Numbers. Dart GTS VIN followed a pattern set up in 1966. The first symbol should be "L" for the Dart line and the second symbol represents the price class, in this case it should be "S" for Sport. The third and fourth symbols are for body style: "23" for hardtop, "27" for convertible. The fifth symbol is the engine: "P" for the 340, "H" for the 383, or "M" for the 440. The sixth symbol is the model year, "9" for 1969, and the remaining digits are the sequential serial number.



Perhaps because of its more-pedestrian bodywork, the Dart GTS came not only as a hardtop, but also as a convertible. The Dart was unique among compact-class domestic cars in offering a convertible for 1969, and nearly unique in offering a hardtop. In an unusual move for the time, Dodge had actually gone the other way and dropped its slow-selling two-door sedan (available for 1968 only in the low-line series—just “Dart” and no longer 170; likewise, the old 270 series was now billed as “Dart Custom”) and replaced it with the Swinger hardtop.

Falcon and Nova, meanwhile, had ceded convertibles and hardtops to Mustang and Camaro, offering only pillared sedans for 1969. American Motors had never ported the convertible body style over when it had shifted the performance mantle from the Rambler Rogue to the AMX, perhaps spending the money to create the five-passenger Javelin instead, but a Rambler hardtop was still available in 1969—where it hosted the Hurst SC/Rambler performance machine.

Perhaps it was because of the 390-powered SC/Ramblers that Dodge saw fit, for 1969 only, to supplement the 340 small-block and the 383 B-series big-block with an RB-series 440—second only to the vaunted Hemi in Chrysler’s performance hierarchy. Engine choice partially dictated transmission choice as the four-speed, which was standard



LEFT: GTS buyers could opt for the standard small hubcap (center), deluxe wheel cover (top) or the deep-dish wheel cover (bottom).

ABOVE: The 340 small-block (center) was standard with a 383 (bottom) optional. A small run of cars received 440s (top).



behind the 340, was optional only with the 383. The 440 required the Torque-Flite, which was standard with the 383. Hurst had built a sampling of Darts (and Barracudas) with Hemi power the year before, but the '69 GTS was the biggest, most-powerful engine offered in the Dart for the street.

Base engine in the GT was the 340-cu.in. V-8, producing 275 hp at 5,000 rpm and 340 lb-ft torque at 3,200 rpm. Standard rear gear with the 340 and with the 383 "Magnum," regardless of transmission selection, was 3.23:1. The 383 was perhaps less challenged by that thanks to its 410 lb-ft of torque at 3,600 rpm, and its 330 hp at 5,200 rpm hinted at better acceleration, though 340 owners have always been happier with their handling—and perhaps more apt to care about such things.

Of course, the 440 is the big show, and while it was not the miniscule-quantity (80) race-only machine that the Hemi Dart had been, the GTS 440 wasn't exactly built in enormous numbers—just 640 out of 6,700 Dart GTS models produced. The 440 was the 375-hp unit normally found in the Charger R/T and Coronet R/T, making its rated power at 4,600 rpm and hitting a torque peak of 480 lb-ft at 3,200 rpm. Standard gearing with the 440 was 3.55:1 and 3.90:1 was optional.

Not available with the 440 in the Dart was the four-speed. The raised deck of the 440 wrought havoc with engine-bay engineering, and the boys at Mr. Norm's Grand Spaulding Dodge, who pioneered the conversion for their in-house GSS model in 1968 and did the initial engineering on the '69s (assembly was handled by Hurst) couldn't make the clutch linkage work, nor power steering or power brakes. Air conditioning was another "NA" in the option guide when either big-block was specified.

Absence of room for a brake booster also nixed disc brakes from the option sheet on 440 cars. Such is the price you pay for drag-racing dominance—and the GTS 440s were aimed squarely at NHRA's Stock classes, the same place the A/FX Golden Lancer had been playing back in 1962. They couldn't let AMC's SC/Ramblers have all the fun, right? ■



Bucket seats were standard in GTS hardtops, optional in convertibles. Headrests became standard equipment in January 1969. The console was an option, but mandatory when a big-block and automatic were ordered.

WHAT TO PAY

	LOW	AVERAGE	HIGH
Hdtp: 340/Auto*	\$6,500	\$14,500	\$20,000
Conv: 340/Auto*	\$9,500	\$20,000	\$29,500
Hdtp: 340/4-speed	\$7,000	\$15,500	\$22,000
Conv: 340/4-speed	\$10,000	\$22,000	\$32,000
Hdtp: 383/Auto	\$8,000	\$18,000	\$25,500
Conv: 383/Auto	\$11,500	\$25,500	\$36,500
Hdtp: 383/4-speed	\$8,500	\$19,500	\$28,000
Conv: 383/4-speed	\$12,500	\$28,000	\$40,500
Hdtp: 440/Auto	\$18,000	\$40,000	\$57,000

*Add 5 percent for factory air conditioning.



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13th Annual

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Chevy W-Engine Cars
Vintage Race Cars
Fresh Restoration



MASTER OF CEREMONIES: Bill Rothermel

Bill's broad knowledge and experience as an automotive historian and writer – as well as his role as master of ceremonies or judge in over 20 concours-level events nationwide – position him as an unrivaled expert. He's also a valued member of the Boards of Directors of the AACA Museum in Hershey, PA, and the Elegance at Hershey, and a past-Board member of the Rolls-Royce Foundation and the Boyertown Museum of Historic Vehicles. His lifelong interest in cars of all kinds and eras makes him a fascinating automotive commentator.

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NEW CHALLENGES FOR OLD CARS

BY TERRY McGEAN

THE WORLD OF CLASSIC-CAR ownership is often focused around acquiring the vintage car of your dreams and then returning it to some former glory, either in factory trim, dressed in period accessories the way you had once done it, or as a more contemporary version of your favorite model, taking advantage of today's technology. Acquisition, restoration, and modification could probably serve as the cornerstones of our hobby, but what do you do once you've conquered those challenges? What if starting a new project isn't in the cards, or the prospect has lost some of its luster?

Our Special Section this month looks at ways to enjoy the classic car you already have, by getting out and using it in ways you may not have imagined before. It's probably safe to assume that most muscle car owners have participated in car shows, some competitively. Cruise nights have also become a popular and simple way to get the old car out and mingle, but what about putting the car and its driver to the test?

Drag racing has long been associated with muscle cars, and it's still a great way to enjoy them, but

today there are plenty of other types of events held regularly that enable enthusiasts to engage in performance driving or otherwise compete that are still safe for man and machine.

Autocrossing has become increasingly popular for some muscle car owners, and open track events are another way to wring out the equipment. Or, if you're not looking to exercise a lead foot, time-speed-distance rally driving is a time-honored way of getting an old car out on the road with challenging purpose.

Of course, the classic American road trip maintains its allure, particularly if you opt to set out on "blue roads," those secondary highways that wind right through the cities and towns of the U.S., rather than bypassing them. It's still a great way to see the country and experience the local treasures you'd otherwise miss. And with today's communication technology and logistical capabilities, coping with breakdowns or other roadside pitfalls has probably never been easier.

So, take a look at the various suggestions that follow, and consider getting your classic muscle car out of the garage to try something new. You may just discover your next favorite pastime. ■

50

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DISTRACTIONS**

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TRACK TIME



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DRIVEN TO DISTRACTIONS

CARS EXIST TO BE DRIVEN, SO DRIVE THEM!

WORDS AND PHOTOGRAPHY BY CHUCK HANSON

“WHAT YEAR MODEL is that ol’ Chevelle?” came the query from somewhere behind me.

I looked up from topping off my tank to see a bewhiskered guy, a bit older than me, but obviously interested in having a conversation. “It’s a ’70 Malibu,” I replied, giving the nozzle handle one last squeeze as I turned around to face him. “Well, I had one just like it back in the day,” he continued. “Except mine was a ’72, and it was blue. And, it wasn’t a convertible, either. But man, I sure have a lot of good memories from that car!”

That brief conversation was an icebreaker that I’d heard innumerable times while out exercising the garage inventory. It seems everyone has fond recollections of times spent in an old muscle car. Before we had stopped, my wife, LaRae, and I had been enjoying the

fall foliage in the Smoky Mountains of East Tennessee, with the convertible providing a great view of the scenery one last time before cold weather set in.

This trip was just one of many we’ve taken in our Chevelles over the years, and it certainly won’t be our last. You see, I love getting my classic muscle machines out on the road every chance I get; each trip, long or short, never fails to paste an ear-to-ear grin on my mug.

Each year more muscle car enthusiasts decide to pull their prized possessions out of seclusion, so they can put a more practical spin on their involvement in the hobby. Their inclinations are reflected not only in the increasing numbers of over-the-road driving events (like Power Tour or Cruisin’ the Coast), but also by the burgeoning number of participants who are all champing at the bit to get out and hit the highway.

Besides, leave one parked for a while and it won’t be long before small puddles of engine ooze appear on the concrete. Or the brake pedal collapses to the floor as the wheel cylinders allow the fluid to slip past leaking seals. And, unless you’ve had a battery tender connected, chances are the starter will only click (if it even gives you that much response) rather than spinning that big-block to life. So, the way I figure it, the best way to preclude those possibilities is to drive your car... as regularly as possible.

But wait, you say. I’ve got 50 grand invested in my car, and I don’t want to put it in jeopardy. Well, think about this for a minute: All vehicle purchases are an investment of some sort. Didn’t you drop about the same amount on a new vehicle, just so you’d have a reliable way to get to work? And your commute exposes it to the possibility of an accident on a



It's always a good idea to give all the nuts and bolts a once-over before beginning your journey. Nobody likes to have parts falling off while driving down the road!



Under the hood there's plenty to look after, including an oil change, a fresh set of plugs, and adjustments to the carb and ignition. Also, check and replace any leaking or questionable gaskets.



Finally, check the wheel bearings, brake pads, and tires for wear and proper inflation.

PREP SCHOOL

Regardless of whether you're planning a short cruise or a cross-country haul, preparation is mandatory. The guiding theory is that if everything is tended to before the trip, there's a significant reduction in the possibility that an unfortunate incident will occur while you're on the road. No matter how near or far you are from home, mechanical mayhem is never any fun.



With proper planning and preparations, even a cross-country jaunt can be an easy, enjoyable trip. Our '70 Malibu convertible took advantage of this photo op in Colorado, on the return leg of a voyage to California.



If you take a trip with friends, considerably more planning is necessary than when traveling solo. Not everyone eats, sleeps, and needs fuel and/or restroom breaks at the same time, so it's important to agree on all the "road rules" ahead of time, and be prepared to make changes as you go.



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Group travel provides safety in numbers, and plenty of assistance and suggestions if you encounter any difficulties. By venturing out of your geographical comfort zone, you'll enjoy new scenery, experience new cultures and customs, and best of all, a sampling of the local cuisines.



Car shows are always a great destination, and you can break the "been there, done that" doldrums by planning to attend an out-of-state event. Not only will you get to see an assortment of "new" classics, but chances are you'll make a bunch of new friends, too!



During an out-of-state trip, one of the planned stops was a short visit at the Hemmings business and editorial compound. We toured the area, scored some cool souvenirs, and even topped off our tanks with Sunoco premium.



By traversing secondary roads, we encountered plenty of small communities where we ate at local cafes, visited with local folk, and generally enjoyed the travel at a slower pace.

daily basis. But then you know that in the case of a catastrophic occurrence there are plenty of new vehicles that can be purchased as a replacement.

Well, things aren't much different when it comes to driving your classic. And, if you have adequate insurance on your collector car, you can venture out with confidence. After all, in the event of a calamity, there are still plenty of worthy replacements available from countless sources. But do keep in mind the term "adequate." Be sure to review your policy regularly and maintain coverage that reflects the current market conditions, or you could come up short if you have to purchase a replacement for your bent classic.

There's another aspect of muscle machine ownership that many may not consider, and that's "What happens to our old cars once we're done with them?"

That's one that deserves consideration. While the younger generations may not share our financial wherewithal, that doesn't make them any less enamored of the iron itself. They just have difficulty envisioning themselves in something they think is so expensive and out of reach.

Much of that problem stems from the fact that most of the muscle cars they encounter are six-figure restorations hauled to car shows in enclosed metal cocoons. How can they relate to that? Give 'em something to really connect with, that they can see, smell, and touch. Give 'em something they can realistically aspire to own. When they spot you out cruising, answer their questions, encourage their involvement, and offer them a ride in your pride and joy. Every gearhead remembers *the* car that pushed them over the edge, and it's very likely that you (and your muscle car) may just

provide someone that final nudge.

I remember the first car that really spun my crank. It was a '69 SS 396 Chevelle that showed up regularly at the local burger joint. Le Mans Blue with a white bench interior and a Hurst shifter jutting from the floorboard. It was all business. Under the hood was an aluminum-headed 396 that cranked out an underrated 375 horses. A set of Hookers spit into a raspy chambered exhaust system, and I still recall the cacophony of the lumpy solid lifter camshaft, the throaty rumble of the exhaust, and the heady perfume of combusted race fuel as it was expelled from a pair of chrome exhaust tips. That was the car that hooked me for life on main street muscle. I knew that some day, some way, I'd own one like it.

Many of you have probably achieved the goal of owning your "dream" muscle machine, or at least one that satisfies your



One of our coolest stops ever was the Experimental Aircraft Association's (EAA) museum in Oshkosh, Wisconsin. We were allowed to drive out on the tarmac for a photo op next to some of the amazing aircraft on display, like this Korean War-era F86 Sabre fighter.

JUNK IN YOUR TRUNK

Besides luggage, there are a few crucial items that should find their way into your trunk. While a Mustang or Camaro might be a bit tight on trunk space, smaller pieces of luggage can certainly reside in the back seat, which was never seriously intended for human habitation anyway. Larger machines like our Chevelle have fairly prodigious trunks and can haul an amazing assortment of personal belongings and other items that will make life easier should they be called into action.



Since old cars are relatively simple and easy to work on, a small, but well-equipped toolbox will get you out of all but the toughest situations. Additionally, a compact floor jack, jumper cables, and a mat to lie on all merit inclusion, as do an umbrella, some zip ties, and a couple lengths of electrical wire.



Occasionally I've run into low-octane fuel, which doesn't combust well in a high-compression engine. To offset the effects of watered-down fossil fuels and prevent possible engine damage, we always pack a couple cans of octane booster.



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On another trip through Texas we encountered this junkyard, occupied mostly by this herd of Edsels. The dry environment kept the sheetmetal essentially rust-free, except for a little on the surface where the sun had weathered the paint down to bare steel.

quest for coolness. But to get the most enjoyment from your classic, I contend you have to drive it. Doing so affects different people in different ways. Even folks who aren't passionate about vintage vehicles will stop and stare whenever one rumbles past. And the ones who do know what they are looking at will smile, give a friendly wave, and maybe even track you down to engage in conversation.

It's been my experience that, despite the possibilities of breakdowns or other roadside misfortunes (and there have been more than a few!), there really isn't a downside to driving my muscle cars. The good times, the exciting destinations, and the great friends I've made along the way more than make up for those difficulties. And, given the chance to do it all over again, there would be absolutely no hesitation on my part to twist the key and search for the next adventure.

So, what are you waiting for? It's time to peel the car cover off your ride and start planning your own exciting escapade. Here is some inspiration, and a few ideas to help make your excursions as pleasurable and trouble-free as possible. ■



Where in the world would you find someone who collects old windmills? Why, in Iowa, of course! We ran across this unique assemblage off Highway 44, west of Des Moines.



Driving through Tucumcari, New Mexico, we came across the coolest Route 66 monument ever! Not far from it is the New Mexico Route 66 Museum; lots of interesting artifacts and information, plus admission is free.



While running down Route 66 in Illinois, we couldn't resist this shot while stopped at a rest area. Fifty years might have separated the '66 Chevelle wagon and the '16 Corvette, but both were destined to traverse the "Mother Road" and put smiles on their owners' faces.



LEFT: Remember our tip about the octane booster? Well, California is a likely location to add a can to the tank. Generally speaking, however, the low octane ratings found out west are in direct contrast to the high prices at the pump. **BELOW:** In the “good old days,” before cruise control, power windows, and air conditioning became mandatory equipment on all new cars, the best way to enjoy the driving experience was with the windows down and sufficient speed to circulate enough air to keep the cockpit cool. Need more cooling? Just press the gas pedal a little closer to the floor.



MAKE A PLAN, MAN!

Shorter trips may not require much in the way of detailed planning, but don’t even contemplate a lengthy excursion without first laying the groundwork. This can include the distance to travel each day, any hotel stays, fuel/food stops, and any side trips along the way. Also, if you prefer to go by way of secondary roads rather than the super slabs, allow more time to travel at a slower pace, enjoy the scenery, and find pleasure in the parts of America that are often lost in the laser-tight focus many have on reaching their destination as quickly as possible.



Roadmaps... remember them? They’ll help you plot a course (using waypoints) that you can plug into the route planner of a GPS device. A good road atlas is like an American Express card: We never leave home without it!



If you have specific destinations in mind, there’s an abundance of information available from each state’s tourism department. You can make your requests online, and the best part is that all the information is free and will be shipped right to your doorstep.

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TIME-SPEED-DISTANCE RALLIES

MATCH THE CLOCK FOR FUN AND ADVENTURE IN TSD ROAD RALLYING

BY MARK J. McCOURT • PHOTOGRAPHY BY HEMMINGS STAFF

IT'S INGRAINED IN US, THAT need for speed—it's one of the factors that draws us to the high-performance cars that we celebrate in this magazine. We're conditioned to seek the quickest reaction and elapsed times, to reach for the highest numbers on the speedometer. While this is great fun, it's safest and smartest to indulge those pedal-to-the-metal urges on the drag strip, rather than on the street. If you're looking for something you *can* do on the street—and you thrive on competition, are a disciplined driver, have a willing accomplice, and enjoy road tripping in your 1960s-1970s muscle car—you're an ideal candidate to participate in a Time-Speed-Distance rally.

"TSD," as this style of rallying is called for short, is interesting because it takes place on traffic-filled regular roads at regular speeds, and pits

participants against the clock, rather than directly against each other: The object is to complete an often-complex driving route filled with stops, starts, and changes in speed, while exactly matching a pre-determined time. The driver-navigator team must communicate and work together well, because the pair that "zeroes" (exactly matches), or comes closest to that perfect time, is the winner.

Any registered and inspected, road-legal vehicle in good mechanical health can be used to join a TSD rally. In those events open solely to older cars, muscle cars have the advantage of their relative modernity in terms of reliability and cabin/creature comforts, plus their inherent capabilities in acceleration and braking. All participating cars must have a properly functioning speedometer, and the navigator will

need accurate timepieces (a clock and a stopwatch) to be able to execute the event directions. GPS navigation systems and mobile phones with driving direction and/or calculator programs are typically not allowed.

For the novice, Time-Speed-Distance is a formula incorporating three variables, two of which are known and the third of which is computed on the fly. The event route is broken down into different sections ("stages"), and participants will encounter numerous checkpoints along the route, where their arrival time will be recorded by rally officials. The route directions are detailed—sometimes with the speeds you should maintain in each stage, in spite of complicating factors like stop signs, traffic lights, and other road users you'll encounter—in a printed document given to participants at the start; in



more competitive rallies, teams receive those printed route books just minutes before they begin, so they won't have the advantage of time to make the calculations their driving will require.

And what do those calculations entail? The route book will give you turn-by-turn directions, along with key visual cues, and while it might inform you how far you will travel at a certain speed, you'll have to figure out how long that section should take. To determine if you're maintaining the required average speed, your navigator must do some quick math: reduce the elapsed time into seconds, divide the miles you've driven by that time in seconds, then multiply that result by the number of seconds in an hour (3,600, if you're counting!). Compare the answer to the perfect speed to see if you need to be heavier or lighter on the throttle during

the next section, to match the overall perfect time. If a rally's rules permit it, having a printed chart that correlates miles per hour with seconds per mile can make it easier for the navigator to keep the driver on track, on the fly; with the stage's perfect average speed in mind, cross-check the number of seconds it took you to cover the last mile against the number of seconds associated with your speed on the chart, and you can continually alter your pace as needed.

If this sounds overly complicated, it's really not—it just takes some practice for a driver and navigator to establish a rapport so they can quickly and efficiently communicate what needs to be done. And many car clubs and larger organizations host TSD rallies that will offer plenty of opportunities to practice this fun motoring challenge. It's worth contacting the local chapter of

your favorite marque's club—or even a regional sports car club—to see if a rally is scheduled in your area. You'll find nationwide groups like the Sports Car Club of America (www.scca.com) regularly host TSDs, SCCA calling its version a "RoadRally."

The top level of Time-Speed-Distance competition in America is, of course, the world-famous Hemmings Motor News Great Race, presented by Hagerty (www.greatrace.com). We spoke with Great Race director Jeff Stumb and got some great news for muscle car enthusiasts: Starting with this year's event, which takes place between June 22 and June 30 and runs from Riverside, California, up to Tacoma, Washington, the model year cut-off for entrants has been raised from 1972 to 1974, so any vehicle built through that latter year is eligible to join in.

"That does encompass just about any

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classic muscle car you can think of," Jeff says with a smile. "When the Great Race was started nearly 40 years ago, it was only open to prewar cars—there were lots of Teens and Twenties cars participating. You'll still find prewar cars involved today, but we've also had our share of muscle cars over the last few years. Most of the spectators who come to the Great Race are not necessarily car people—they come to see this unique event, and we've got an opportunity to introduce them to these wonderful old cars. It's interesting to see how some will gravitate towards the 1918 American LaFrance fire engine, while others gravitate toward the four-speed 1969 Camaro Super Sport."

While you might think that an automotive history-focused event like the Great Race would demand its participating vehicles be 100-percent factory stock, that's not the case, we learn. "I personally own a 1965 Bel Air that started life as a six-cylinder car, but is now a 396/425-hp four-speed, and if I didn't tell you, you wouldn't know that unless you looked at the serial number—it's that correct," Jeff reveals. "The Race doesn't discriminate about engine swaps like this: As long as that

equipment was available at the time, no harm, no foul. The whole idea is to get the cars out and on the road.

"There are other modifications that are allowed for safety reasons," he continues. "When it comes to muscle cars, if someone is more comfortable using disc brakes than the drums the car was built with, we're fine with that. And if you have an older car like a Model A, you can run hydraulic brakes, which obviously weren't original equipment. We've never had a serious injury in the event, and we want everyone to be safe."

Another Great Race-permitted alteration from factory-built is wheels and tires, for reasons of grip, comfort, and convenience. Organizers accept a 2-inch-diameter variance from original equipment, and a change from bias-ply to radial tires. Therefore, if your car left the factory with 15-inch wheels wrapped in bias-ply tires, you could replace those with wheels sized 13 to 17 inches, mounting radials.

"When it comes to modifications like installing fuel injection in place of carburetion on your 1969-1974 muscle car, you would technically be penalized for using more modern equipment, but the penalty is so small, you will not really see any fluctuation

in your score. On the other hand, if you had a 1929 Ford and installed a post-1948 carburetor—prewar cars can use any carburetor that was built through 1948—you'd then get scored from the year of that carburetor, rather than from 1929, which significantly alters your handicap," he explains.

When asked if he had any advice for those considering trying a TSD rally for the first time, Jeff replies with a laugh: "It's not as hard as we make it seem like it is. When you break it down, it's quite simple. You get to be with like-minded car people, as guys with prewar cars love muscle cars, and vice-versa. You can spend a weekend doing a regional rally to find out if you really like this... most people find they do, and they get hooked on it. Many who do the Great Race for the first time tell me, 'We're just here to have fun.' If they go in with that in mind, and just do the best they can, a lot of people are pleasantly surprised at how much they like it. Although ours isn't a race of high speeds, it is still a race—there's competition, there are winners and losers; you'll be surprised to find it's challenging to drive your car, even at 30 mph. If you have a muscle car and you like to drive it, the Great Race is the perfect venue for that." ■

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NATIONAL AUTO SPORT ASSOCIATION

TRACK TIME

USING YOUR MUSCLE CAR FOR COMPETITION

BY TERRY McGEAN • PHOTOGRAPHY BY HEMMINGS STAFF UNLESS OTHERWISE CREDITED

MOST FANS OF FACTORY muscle are also fans of motorsports, so why do so few of us use our cars to emulate our racing heroes? Probably because auto racing often seems like the exclusive province of pros—not a place for weekend wannabees to play. But that's changed quite a bit over the past couple decades. Now amateur drivers can get out on real race tracks with their own cars and, with a little instruction, push their machines to levels not allowed on public roads.

Drag racing is the motorsport most closely associated with muscle-type cars, and for obvious reasons—it's what many of them were built for. And drag racing has long been one of the most accessible forms of on-track competitive driving an enthusiast can participate in. Most tracks have had test-and-tune events for many years, allowing drivers to make passes without necessarily having to think about the car in the other lane. That's been a tried and true way for the novice to dip a toe in on-track driving, and it still has the potential to provide some thrills and engaging competition, whether running heads-up or in brackets.

But, since drag racing is at least somewhat familiar to so many muscle

car owners, and since we just covered the sport in more depth in the October 2018 Special Section (*HMM* #182), we're going to focus on other forms of performance driving that may not be on your radar—ones that involve turning left and right rather than just blazing in a straight line.

AUTOCROSS

If drag racing is the most accessible way to competitively test your car's acceleration, autocross is the handling equivalent. Autocross events are typically held in large parking lots, where tight-handling courses are set up using traffic cones. Usually, one car is on the course at a time, and timing equipment is used to determine a driver's performance through the course. Part of the challenge is avoiding contact with the cones, as knocking any over incurs penalties in the form of time tacked on to your timeslip—generally 2 seconds per cone. Courses are almost always unique to a particular event—the next time you come to compete, it will likely be a completely different course, even if the location remains the same.

Despite the opportunity it provides to push your car to its handling limits, autocross is quite safe, with speeds generally

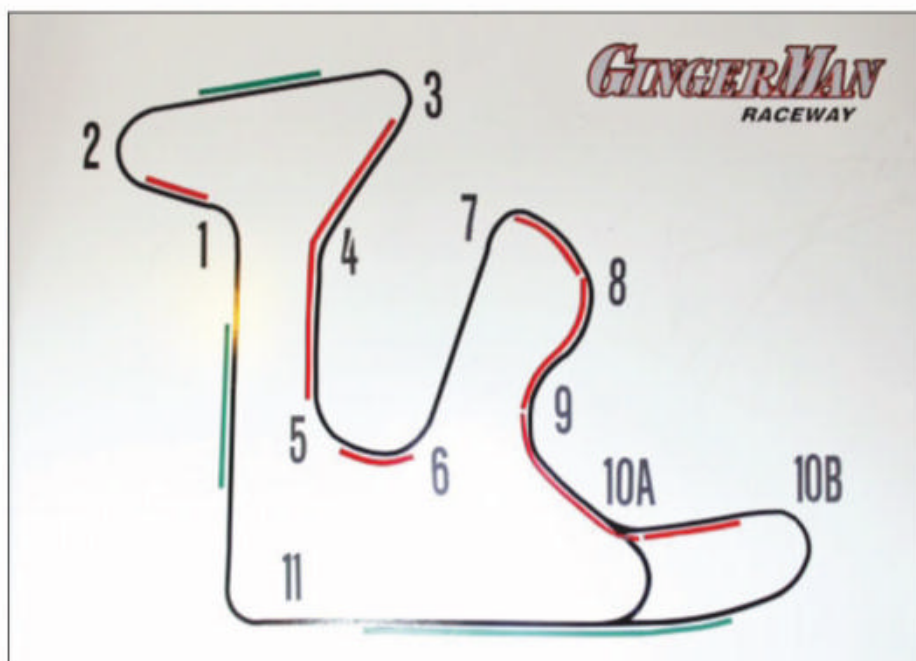
staying below 60 mph—sometimes much lower. Yet it is quite challenging and exciting.

Vehicle requirements are broad, but often prohibit anything with a high stance, like a 4x4, due to concerns about rollover potential. Rules vary with organizations, with some requiring street-registered and insured vehicles, while others do not. Similarly, some organizations require a helmet, and will have specific helmet standards, while others don't require one at all. Obviously, it will be important to familiarize yourself with the rules and regulations of the organization you plan to run with.

Autocross is most commonly associated with the Sports Car Club of America (SCCA), as it is the largest regulating body for this type of competition, hosting a schedule of events throughout the country every year (scca.com). The SCCA calls its traditional autocross events "Solo," and holds an annual national championship event, known as the Solo Nationals, in a central location—most recently, Lincoln, Nebraska. SCCA also has something it calls "ProSolo," which combines elements of drag racing with autocross. Two mirror-image courses are set up, and two drivers begin simultaneously



NATIONAL AUTO SPORT ASSOCIATION



Track day events are a great way for the aspiring road racer to get started. Most include some classroom time followed by in-car tutoring with an instructor. Passing at these events is usually restricted but sometimes permitted in certain sections of the track, as the map depicts.





NATIONAL AUTO SPORT ASSOCIATION

Though the road course was once the province of sports cars, American muscle is not uncommon at open track events. For beginner-level classes, equipment requirements are pretty basic, and though approved helmets are a common requirement, these can often be rented.

with a straight-line acceleration contest before turning into a challenging cone course. This level of competition is more intense, but still very accessible, and there are plenty of Camaros, Mustangs, Corvettes, and other American performance machines competing.

Another outfit that has been putting on autocross events across the country is the Goodguys Rod & Custom Association. Goodguys is most often associated with car shows, and has been hosting a schedule of large-scale gatherings since 1983. Currently, it puts on 18 events per year, many of which include an autocross competition. The general rules for Goodguys Autocross are similar to SCCA, though you're much more likely to see vintage muscle cars (along with pickups and street rods) threading the needle through the cones here.

This competition has gotten fairly serious, drawing some well-known cars and drivers from the Pro-Touring movement, but you'll still find beginners making their first runs using cars that have had

virtually no prep, other than to comply with tech inspection, which has minimal requirements for autocross. Check the Goodguys website for event locations and scheduling (not all of its events include autocross), and also for a look at its autocross rules (www.good-guys.com).

TRACK DAYS

The form of motorsport that probably seems most foreboding to the average onlooker is road racing. Though its name traces back to early competitions held on public roadways that were temporarily closed for racing, today road racing most commonly takes place on dedicated closed-course racetracks, with varying turns in either direction. This is the type of racing that was once almost exclusively for sports cars, though over the decades since WWII, a broader variety of vehicles have been used, including plenty of American-made models.

The earliest years of the SCCA's Trans-Am series were perhaps most responsible for merging straight-line Detroit

muscle cars with handling prowess—the series motivated the creation of the Camaro Z/28, Boss Mustang, Challenger T/A, 'Cuda AAR, Javelin Trans-Am, and of course, the Pontiac Trans Am.

Despite an image of being off-limits to the casual hobbyist, especially muscle car owners, road racing has probably never been more accessible to enthusiasts than it is today, thanks in large part to events known as "track days."

Track days are events held at road course sites that provide access to track facilities to amateur racers, including absolute beginners. Requirements for tech inspection can be more stringent than for autocross, but for the most part, a road-legal car that passes a state safety inspection may not need much more than a proper, mounted fire extinguisher and possibly upgraded seat belts (depending on what the vehicle came with from the factory). Note, though, that open cars may have roll bar requirements. Helmets are almost certainly required, and again, there will

likely be specific helmet specifications.

Most track day events also require that drivers have some familiarity with safety rules, driver etiquette, and basic technique, so first-time drivers must usually attend a classroom session first, followed by track time with an assigned instructor. Most events that encourage and educate beginners have on-track rules to keep things safe, so for example, passing may not be allowed for first-timers, or it may be restricted to certain portions of the track. Once the instructor okays a student, that driver can then go solo on the track.

There are a number of organizations that put on track day events, though one of the most recognized nationally is the National Auto Sport Association (NASA, nasaproring.com). NASA hosts what it calls High Performance Driving Events (HPDE), often in conjunction with its other racing programs. The HPDE program is aimed at the novice enthusiast who wants to get on track and learn how to drive on a road course effectively, and possibly competitively. But, even if you're just looking for some low-pressure track time, an HPDE is an excellent way to get your fix while improving your skills.

TIME TRIAL/TIME ATTACK/ HIGH-SPEED AUTO X

There is yet another form of on-track driving that the average muscle-car owner can partake in that combines elements of autocross and road course competition: time trial racing. This type of event is also sometimes called "Time Attack" or high-speed autocross, but the idea is the same. Competitors make laps one car at a time, as they would in autocross, only here a road course is used, rather than a tight cone course. A typical run works like this: The driver enters the track and gets up to speed during a "warm up" lap. Then, as the vehicle crosses the start/finish line, the clocks are triggered to measure the timed lap. Crossing the start/finish line again ends the timed lap and begins a "cool down" lap as the driver backs off the speed and makes his way back around to the track exit.

Different organizations handle these competitions in varying ways, but the

basic idea is that drivers are competing against one another using lap times, but without ever engaging in wheel-to-wheel racing. These are often referred to as "speed events" rather than racing, and this type of road course competition tends to be far safer for both the driver and the vehicle, making it a lot more inviting to owners of performance cars that are more for street use and show duty than bumping fenders.

Beyond the competitive element, these types of events are especially appealing for the opportunities they provide to make laps on a proper road course at speed, with whatever car the participant chooses. As with other track events, you should expect a tech inspection, helmet requirements, and possibly additional driver gear stipulations, so studying the organization's rules and regulations ahead of time is critical. However, these events are often geared toward grassroots-level enthusiasts and their cars, so entry-level classes often have fairly basic equipment requirements, generally on par with other types of track days.

GET STARTED

Competition driving is exhilarating, though the prospect of approaching these sorts of events can be intimidating to the novice. However, you're very likely to find helpful members of the organizations sanctioning these events who are happy to assist with your in-

troduction and education. Most driving events require a steady influx of new participants to keep attendance levels healthy and ensure the ongoing vitality of the organization, so don't hesitate to reach out with inquiries.

When it comes to car prep, experienced members can shed further light. Though many of the vehicles you'll see in the pits of a driving event may seem to be highly outfitted, that doesn't necessarily mean all of that equipment is required to get started. Most beginner classes don't require roll bars (in closed cars) or even racing harnesses, and factory-spec wheels, tires, and brakes are often acceptable as well, even if they might hinder performance. Many beginner-level classes mandate DOT-legal tires, and it has become popular to specify a minimum 200 treadwear rating. At the most basic level, loose items inside the vehicle are prohibited, and any fluid leaks that are detected—or even suspected, due to tell-tale signs of seepage—are often enough to keep you off the track, so make sure everything on your vehicle is sealed up tight and clean.

Most of what you'll need to know will be listed on the host organization's website, but it's always a good idea to plan an exploratory trip to attend an event you're thinking of entering as a spectator first. There's probably no better way to familiarize yourself with procedures, rules, and the personnel who can help you get started. ■



Autocross is as accessible as drag racing, and while the regulars at any regional event will have well-equipped cars, bone-stockers are generally welcome, so long as they pass a basic tech inspection.

■ **RESTO**

1970 **OLDSMOBILE** 4-4-2

THIS STOCK-LOOKER FROM LANSING CONCEALS A RARELY SEEN ENGINE

BY MIKE McNESSOR • PHOTOGRAPHY BY JEFF KOCH • RESTORATION PHOTOGRAPHY PROVIDED BY FRED MANDRICK





THE CANADIAN-AMERICAN CHALLENGE Cup, better known as Can-Am, was the automotive equivalent of *Fight Club*, but with fewer

rules. In the heat of this bare-knuckle competition, the legendary all-aluminum Chevrolet ZL-1 427 engine was born, and dealer Fred Gibb worked the system to get 50 of those howling race engines installed in '69 Camaros. Nineteen more followed for a total of 69.

But you already knew all of that. What you might not have known was that Oldsmobile, GM's engineering division, eagerly eyed Can-Am's no-holds-barred environment as a place to experiment a little too.

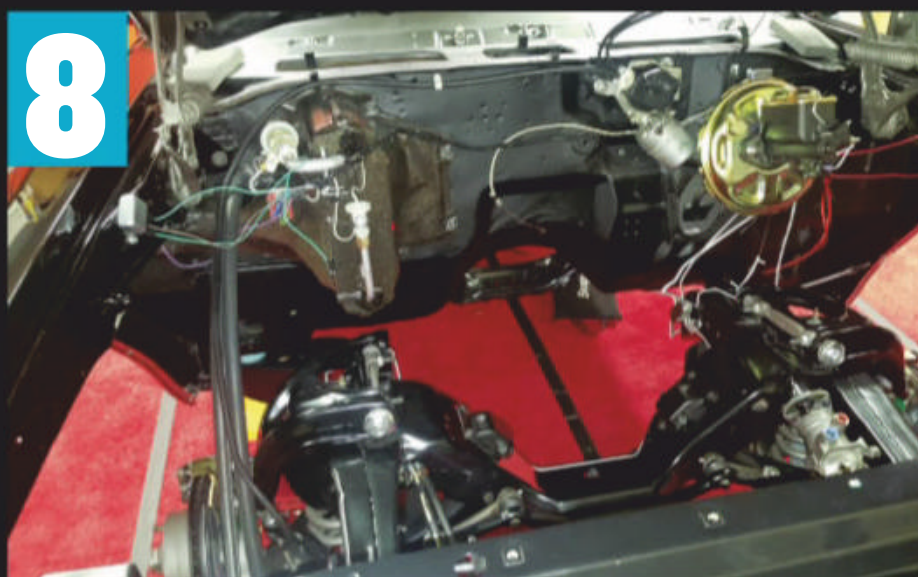
The most radical of those experiments appeared on the cover of the July 1969 issue of *Hot Rod* magazine. This definitely wasn't your father's Rocket: twin turbos, stack fuel injection, aluminum block with four-bolt mains, forged steel crank, Carrillo rods, forged pistons, Crower roller camshaft, and topped with aluminum heads. Peak power and torque figures at 6,250 rpm soared to 659 hp and 554 lb-ft, but the article hinted that Olds engineers believed 700-plus horsepower was within easy reach.

The car this engine powered (built by famed Indy car builder Bob McKee) was based on a stainless steel and titanium chassis with all-wheel drive. It might've revolutionized the series had GM brass not pulled the plug on Lansing's foray into Can-Am.

Luckily, a handful of these experimental aluminum engines (350s as well as 455s) have survived and found their way into the hands of collectors. One of whom is Fred Mandrick, of Scottsdale, Arizona, a serial 4-4-2 restorer who built this month's stunning triple-black feature car. Oldsmobile never put an aluminum 455 in a production automobile, but Fred wondered what such an animal might look, or more importantly, run and sound like.

This exotic engine was actually assembled from two different 455s: the block from one, the heads from another.

"The guy I bought the block from had built it for a drag car but never finished the project," Fred said. "It came with a set of [aftermarket] Batten heads and



a Batten intake. So, I found a second 455 that had a set of correct aluminum heads, and I bought that in order to make a complete engine. The heads had been polished, so we had to media blast and vapor blast them to try and get all of the finishes to match.”

The sleeved aluminum block was bored .015-inch, and Chris Shea at 1320 Auto installed custom-ground JE forged pistons for a 10:1 compression ratio. An Oldsmobile forged-steel crank now swings steel H-beam connecting rods.

At the big, lightweight V-8’s heart, a Lunati hydraulic roller cam was installed to activate Harland Sharp roller rockers and stainless valves—2.00-inch intake and 1.62-inch exhaust.

This engine build posed a lot of unique challenges due to the 455’s race-only heritage. For instance, oil and water passages differed from a production 455, necessitating some custom machine work, and things you’d take for granted when screwing an engine together, like torque specs, were unavailable. Needless to say, the engine’s reassembly required some educated guesstimates.

“Getting that engine together and getting everything to seal was kind of a challenge,” Fred said. “We spent two weeks assembling it and getting it on a run stand to run.”

The car now powered by this unconventional V-8 started as a regular production 1970 Oldsmobile 4-4-2 convertible



1. Fred Mandrick used an engine hoist to lift his 4-4-2's body shell off the chassis. **2.** Next, he started stripping the drivetrain components before cleaning the undercoating off the frame rails. **3.** The 455 that came with the car wasn't its original, but it was W-30 spec. Here it's hanging from the engine hoist courtesy of a factory engine lifting fixture. **4.** The body was sent to Hood's Etc. in Tucson, Arizona. All of its sheetmetal was media blasted, then the driver's- and passenger's-side floors were repaired. **5.** The frame and chassis hard parts were powder coated with a satin finish. To improve the 4-4-2's road feel, Fred upgraded the steering box to a 12:1 ratio. **6.** Fred dug into his parts stash and pulled out the rare aluminum W-27 axle pictured here with powder-coated tubes and backing plates, ready for the installation of 3.23:1 gears. **7.** The crew at Hood's Etc. put some muscle into reuniting the body and frame but were careful not to scratch the Axalta Cromax base and clear they'd just applied. **8.** The car's firewall was replaced to accommodate factory air conditioning. **9.** A new stainless fuel tank received a light polish before being installed along with new lines. **10.** The original Hurst handle had to be tweaked to fit through the center console and attach to the five-speed transmission.



with a four-speed, but a previous owner had swapped in a replacement W-30 engine.

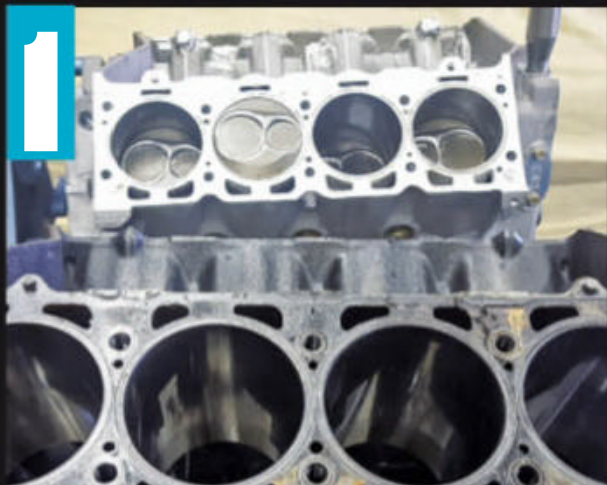
"I'd known about the car for more than 20 years," Fred said. "The owner lived in Phoenix and I'd noticed it sitting covered under a carport at a condominium complex. I stopped once and could see it was all black and a 4-4-2. I drove past it periodically over the next few years and suddenly it disappeared. In 2015, I spotted it for sale on Craigslist, went to look at it, and ended up buying it."

Fred pulled the nonoriginal W-30 engine and sold off the heads, manifold, carburetor, and distributor to offset the car's purchase price. He then disassembled the 4-4-2, moved

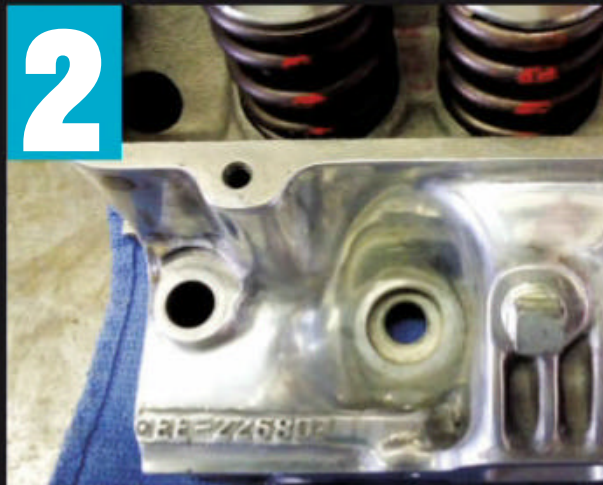
the body shell to a spare chassis, and began working on the frame, suspension, and steering.

"I just took the chassis all apart: Pulled the rear axle out, the suspension out, removed the brake and fuel lines. Since I've done enough of these, I know where everything goes. I don't even need to take pictures anymore," Fred said.

After some hard time in the Arizona sun, scraping undercoat off the frame, Fred sent the rails out for powder coating along with all of the chassis hard parts. Back in his shop, he rebuilt the suspension and steering with new Moog replacement parts, including fresh coil springs. In the process he added a rare W-27 rear axle—its aluminum center section the



1 The aluminum Oldsmobile 455 block (rear) alongside a production cast-iron version. Here it's packing 15:1 pistons.



2 A second 455 donated its aluminum heads. Someone had polished the castings, but they were restored to a natural finish.



3 The block was bored .015 and fitted with a custom set of 10:1 pistons. Pressed-in liners provide the cylinder surfaces.



4 These blocks were built for roller lifters, so a hydraulic roller was used. Aluminum roller rockers work the valves.



5 The exotic 455 dropped in with little fuss. It runs great, fired by a points distributor and through exhaust manifolds.



6 An optional W-37 dual-disc clutch was used for extra clamping force between the 455 and a new five-speed.



7 The plan was to run fuel injection so an O2 sensor was installed. For now, a Q-Jet handles the mixing chores.



perfect complement to the all-aluminum 455. That, too, received a trip to the powder coater to make the axle tubes look like new, while the housing was media blasted and cleared.

The car's brakes were left stock—front disc and rear drums—but the master was sleeved, the calipers rebuilt, and the wheel cylinders replaced along with all of the shoes, pads, etc. To protect the 4-4-2's paint finishes in the event of a spill or leak, DOT 5 silicone-based brake fluid was pumped into fresh lines and hoses from Inline Tube. The fuel lines were also replaced and connected to a reproduction stainless tank that Fred polished a little for some extra shine. For improved road manners, he added a 12:1 ratio steering box that can deliver lock-to-lock in 2.5 turns

While the chassis was getting the once-over, the body was sent to Hood's Etc. in Tucson. The 4-4-2's body was media blasted with walnut shells, and a front driver's-side floorpan was stitched in along with a repair panel on the passenger's-side toe board. The firewall was also replaced to accommodate a factory air-conditioning setup.

After bodywork and multiple rounds of priming and careful block sanding, the car was shot with two coats of Axalta Cromax base followed by six coats of clear. Once the freshly painted body and chassis were reunited, the all-aluminum 455 was installed with surprisingly little difficulty according to Fred. Behind it? A reconditioned W-37 dual-disc clutch (first optional in '71) and a Legend Gear five-speed manual transmission.

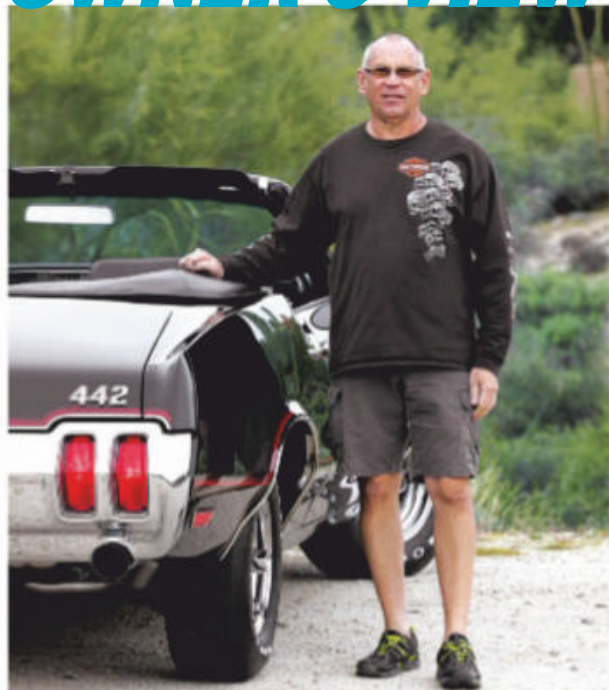
During the reassembly, Fred lavished many other factory upgrades on the car as well, including a Speed Minder speedometer, power door locks, power front seat-back releases, power windows, tilt column, power trunk release, deluxe seatbelts, front and rear floor mats, plus a lighted rearview mirror.

A new-old-stock bumper was used up front while the original rear was sent out for refinishing. Meanwhile, the 4-4-2's stainless trim bits were polished and exterior chrome trim was replated, and the emblems were replaced with NOS pieces.

Inside, the interior was reskinned with Legendary



OWNER'S VIEW



I had a diverse car collection for a while, and then all of a sudden these 4-4-2s just kept finding me. Now I'm the 4-4-2 guy. These cars were well built. They're a little bit underrated and under-appreciated, but still very cool.

This car is by far my best build. Everything works like it's supposed to. The power windows go up and down, the top works, all the lights work. It goes straight down the road and rides nice. I'm really happy with the project.

—Fred Mandrick



upholstery and new carpet laid on the cockpit floor. Fred is retired from the business of staging big audio-visual displays at major events, so a deluxe sound system was a must. In the dash, a stock-looking AM/FM radio with Bluetooth from Antique Automobile Radio was installed and connected to a total of seven speakers including a pair of 4.5-inch speakers located in the stock front speaker hole and a pair of 6 x 9-inch speakers in the rear. Fred also slipped two tweeters in the dash, a four-channel amplifier under the passenger seat, and a subwoofer inside the rear seat frame.

The 4-4-2's glass was replaced, and a fresh soft-top installed on the stock, refurbished convertible frame. New hydraulics and lines from Hydro-E-Lectric gave the power-top its like-new operation, while reproduction 14 x 7-inch SSI wheels from Wheel Vintiques, shod with Firestone Wide Oval radial tires, lent the car additional curb appeal.

Fred kicked off the project in 2017 and had it ready for its debut at the 2018 Muscle Car and Corvette Nationals near Chicago, Illinois, last November. He didn't build this car with its rare aluminum 455 strictly to show, however. The air conditioning, power accoutrements, quick-ratio steering, modified sound system, and five-speed transmission were all part of the plan to make this 4-4-2 the ultimate driver.

And that rare racing powerplant? It seems ready to hit the road too. Fred told us that a couple of pumps of the gas pedal and a twist of the key are all it takes to get the 455 started and idling like any other burly Olds V-8. He'd originally planned



A reproduction W-25 Ram Air hood from Thornton Muscle Cars (top) lets the aluminum 455 breathe more deeply. The interior boasts new Legendary upholstery and an NOS steering wheel. Additions include: power windows and door locks, power front seat-back releases, a stereo with Bluetooth (that masquerades as original), a Speed Minder speedometer, and more.

to install aftermarket throttle-body injection on the 455, but the Quadrajet works so well, he's decided to leave it alone. At least, for now.

"Once I get this car all sorted out, I'm driving it," he said. "That was the whole point. It's not going to get driven in the rain, but it'll get used. The only other thing I'm going to add is a 1 1/8-inch front anti-sway bar to make it handle better." ■



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WORDS AND PHOTOGRAPHY BY BARRY KLUCZYK



DAN COOK HAS BUILT MORE MOPAR ENGINES in his lifetime than there are Florida restaurants with “early bird” dinner specials. One of his specialties is a big-torque RB-based stroker combination that’s surprisingly simple in concept and execution, and even more amazing in its relatively low cost. Using a carefully selected mix of new and used components, the 440-based 512-cu.in. engine highlighted in this assembly overview was put together for \$5,865—and it dyno’ed at a very healthy 585 horsepower and 640 lb-ft of torque.

“I’ve built a number of these engines, because the combination works so well for street and track use,” Dan says. “It’s a real torque monster, too, which makes your car really feel alive on the street.”

It’s no slouch on the strip, either. The engine detailed here was installed in Dan’s personal Plymouth, where it ran 11.40 with a TorqueFlite transmission, a 2,800-rpm stall converter, and a 3.54-geared Dana rear axle.

“With good airflow, the RB big-block has tremendous potential,” Dan says. “Modern cylinder heads and intakes really allow the engine to perform so much better than the original 440s and it doesn’t take a wheelbarrow full of cash to do it.”

That said, Dan is judicious in his parts selection. He doesn’t skimp on things like a forged rotating assembly, but balances the build with low-cost parts and some factory components that work, such as original stamped-steel rocker arms and a second-hand aluminum dual-plane intake.

“Over the years, I’ve learned what works, what doesn’t, and also what soaks up money needlessly,” Dan says. “But you also have to be honest about how you’re going to use the engine. With this combination, it’s going to spend most of its

time on the street, with occasional runs at the drag strip. It’s simply not going to spend its life at 8,000 rpm, so there’s no reason to build it for that.”

At a glance, the combo brings the 1.8:1 oversquare bore-to-stroke ratio of the 440 to nearly square. The stroker crankshaft provides a 13.5-percent increase in the stroke—up to 4.250 inches from the stock crank’s 3.750—pushing the engine to a 1.03:1 ratio that helps provide a big boost in torque production. So, no, it doesn’t rev like the DZ 302 in a first-generation Z/28, but it produces mountains of useable torque to more than make up for it.

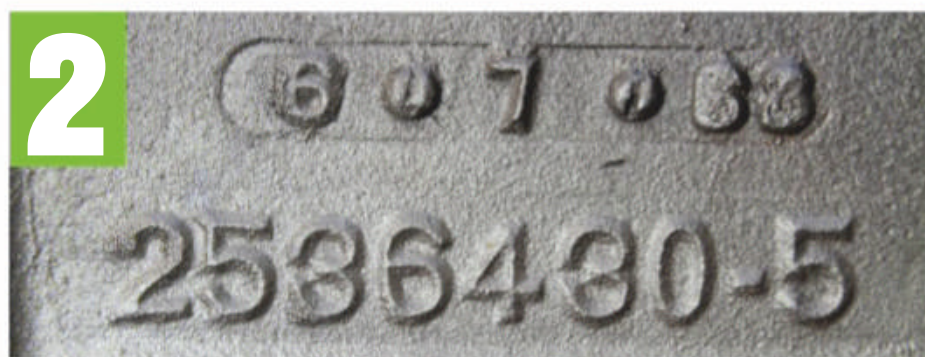
That big stroke is matched rev for rev with ported Marsh Performance Sidewinder cylinder heads that flow more than 260 cfm at 6,000 rpm, topped by an Edelbrock Performer RPM aluminum intake manifold mounting a simple Edelbrock four-barrel carburetor.

“Airflow is everything for this engine,” Dan says. “With the longer stroke, it can process a lot of air, and good-flowing heads such as the Sidewinders or Edelbrock’s Mopar big-block heads are a must, along with the appropriate camshaft. When you get the right parts working together like this, the numbers just shoot up on the dyno.”

For a stealth effect, Dan painted the whole engine, even the aluminum heads and intake, in Mopar turquoise engine paint and capped it with a factory-style air cleaner. At a glance, there’s no clue that the simple and unassuming RB is packing an additional 100 cubic inches—a 23-percent overall increase in displacement. Similarly, there are no obviously expensive racing parts to give away the investment in the build.

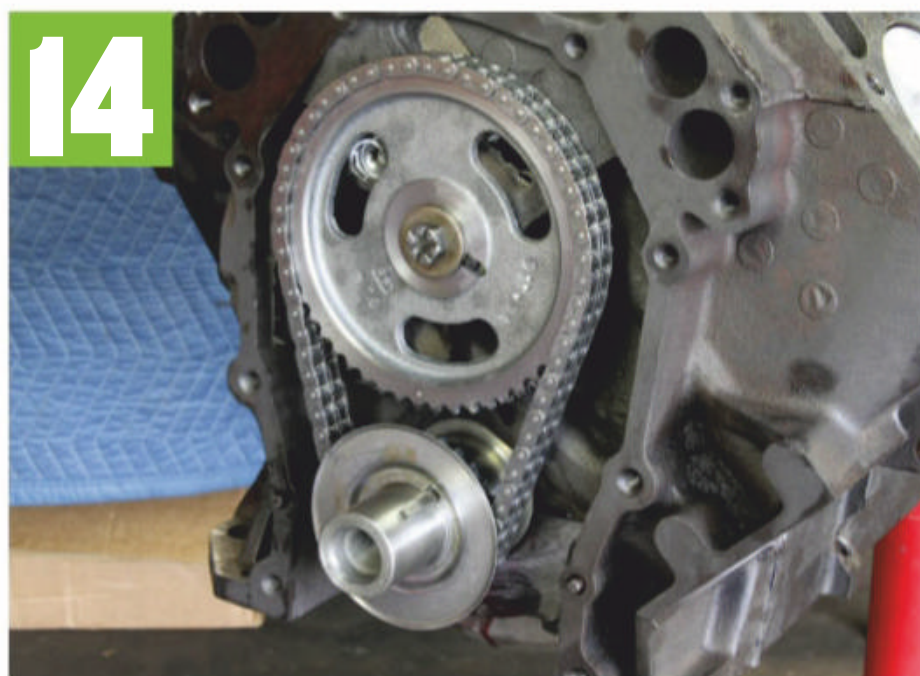
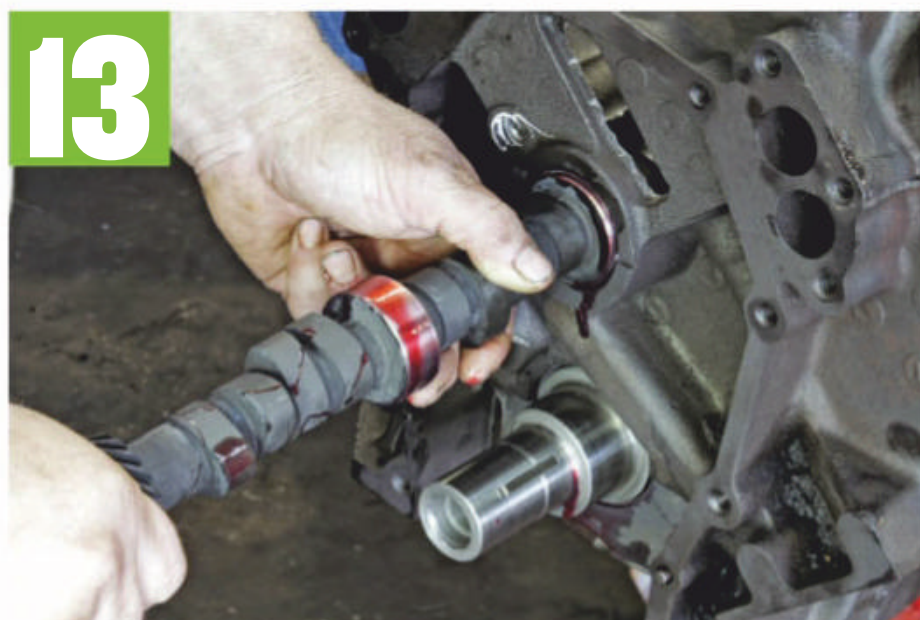
President Theodore Roosevelt advocated speaking softly and carrying a big stick. That’s exactly what this sneaky Mopar stroker engine does.

1. The foundation for the build is a seasoned Chrysler RB cylinder block purchased for \$400. The RB (“Raised Block”) series big-block was produced for 20 years, from 1959 to 1979. All versions used a 3.750-inch stroke, and all featured an oversquare bore-to-stroke ratio that enabled strong rev capability but left a little to be desired in the torque department. **2.** The “2536430” casting number on the block identifies it as a 1966-’72 440 engine, which means it featured 4.320-inch bores to complement the 3.750-inch stroke, for the 440-cu.in. displacement. The casting date above the number shows the block was produced in June 1968. **3.** Besides overboring and honing the cylinders to make them true, builder Dan Cook spent time deburring the engine to remove casting slag that could either fall into the engine or become the starting point for a crack. The cylinders were bored 0.060-inch, taking them to 4.380 inches. **4.** Fluid leaks can be a common issue with RB engines, and Dan takes every precaution to prevent them, including using Permatex Form-a-Gasket sealer with the core plugs rather than driving them home dry.



5. Additionally, a Fel-Pro Viton rear main seal (p/n 2947) is used to help keep “the mud in the motor.” It’s the same part used on Top Fuel and Funny Car racing engines, and according to Dan, it’s the hands-down best part for the job on RB engines. **6.** When it comes to main bearings, Dan uses stock-style half-groove bearings for this primarily street engine to ensure strong oil pressure. Full-groove bearings would be used if the engine’s primary purpose was the drag strip. **7.** Although he relies on some used and some production-spec parts in the build, it’s nothing but all-new and forged rotating components, starting with an Eagle 4340 forged-steel crankshaft, delivering a 13.5-percent greater stroke of 4.250 inches. It also features smaller, Chevy-type 2.200-inch rod journals for extra rotational clearance. The original journal size was 2.375 inches. The crank is part of a rotating assembly kit that cost about \$2,900. **8.** “Bad or incorrect clearances kill more engines than just about anything else,” Dan says, emphasizing the need to check all bearing clearances and other tolerances in the assembly manual. Plastigauge may be low-tech, but it’s an inexpensive way for the homebuilder to verify the fit of fresh machine work during assembly. If any issues are suspected during these checks, then it’s time to consult the micrometers.

9. The original connecting rod length for a 440 is 6.768 inches, but with the long stroke of this combo, Eagle 7.100-inch-long forged H-beam rods are used—and they’ve got the smaller, Chevy-style big ends, used with 0.990-inch wrist pins, to ensure adequate clearance for a factory-style oil pickup tube. **10.** Forged aluminum pistons in the larger, 4.380-inch bores are from Diamond and deliver a 10.6:1 compression ratio. With the 4.250-inch stroke, that brings the bore-to-stroke ratio to a nearly square 1.03:1. **11.** As this photo shows, a long-stroke crankshaft all but insures connecting rod interference with a factory windage tray. Fortunately, there are a number of aftermarket solutions that provide the necessary clearance. Just make sure to order one before bringing the assembly to a halt at this stage. (Dan already had the required tray, but dropped this stock one on for us to illustrate the interference issue for us.) **12.** Dan insists the intermediate shaft bushing for the oil pump drive should always be replaced with a new one. Although it’s true it can be reused, he says the heat from block cleaning can affect the bushing, allowing it to rotate within its bore. And that’s not good. For the couple of dollars it costs for a new one, it’s cheap insurance.



13. Next comes the camshaft: Comp Cams’ most radical Nostalgia/Purple Plus grind, PP292H. It’s a hydraulic flat-tappet cam with 292/299-degrees duration and .508/.508-inch lift specs, with a tight 108-degree lobe separation angle that dials in more valve overlap for a wonderfully lumpy, yet still streetable idle quality. The engine sounds great. **14.** A simple, inexpensive dual-row timing chain with steel gears is used. Nothing exotic here, but it’s worth pointing out the oil slinger installed on the crank hub. It’s a sometimes-overlooked but important part to keep excess oil away from the timing cover seal, which helps prevent leaks, while also throwing oil onto the timing chain. **15.** The oil pump is a simple, inexpensive Melling part available at any auto-parts store. Using a high-volume pump is fine, too, but not necessary for this combination.





16. There are several good aftermarket cylinder-head options for RB engines, and Dan selected Marsh Performance's Sidewinder aluminum heads. They're relatively new and have been well received for their large, high-flow ports. They feature 210-cc intake runners and 70-cc exhaust runners. Out of the box, they flow about 262 cfm on the intake side at 0.600-inch lift. **17.** Combustion chamber volume for the Sidewinder heads is 84-cc, and the valve sizes are 2.14 inches on the intake side and 1.81 inches for the exhausts. **18.** Although the heads flow well out of the box, Dan nonetheless had them ported, including bowl work and port-matching. "It really wakes up the heads," he says. **19.** Comp Cams' dual-coil valve springs are used with low-tech, Chrysler production stamped-steel rockers. "There's no reason for expensive upgrades here," Dan says, but he advises inspecting them carefully for wear, as even the "youngest" set will be at least 40 years old. This set was almost like new, taken from a 12,000-mile motorhome engine. **20.** Mopar turquoise paint, even on the aluminum heads, gives the engine a stealthy, factory appearance. We can also point out the Summit Racing-supplied Six Pack-style steel oil pan, which fits just about every muscle car-era K-member, except 1962-'65 cars.



21

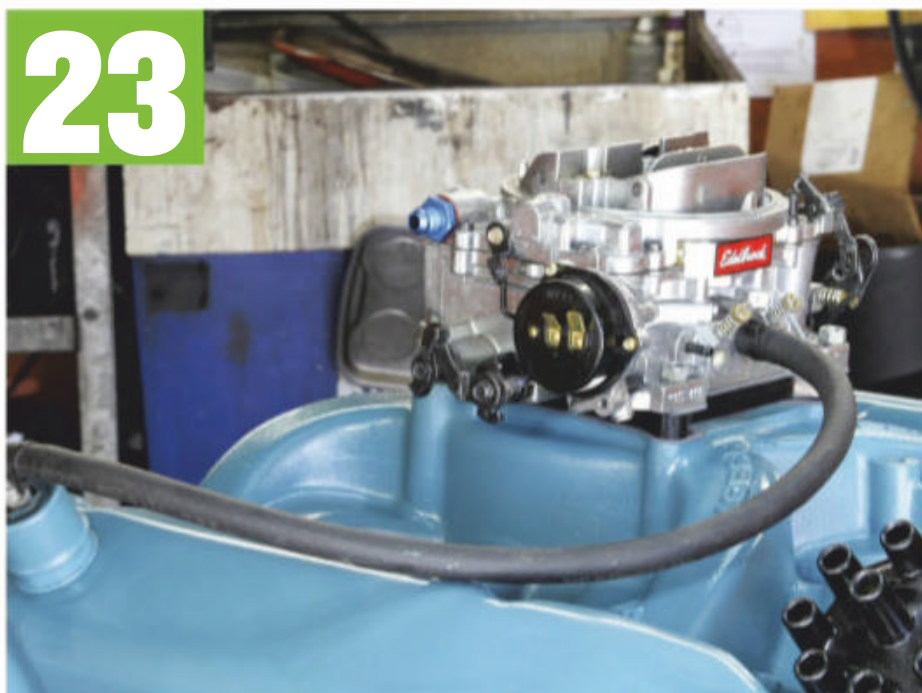


22



21. The assembly continues with an Edelbrock Performer RPM dual-plane aluminum intake manifold (also painted turquoise). In this case it's a Mopar Performance "Wedge"-labeled version, but it is identical in all other respects. It's still in production, but it doesn't take long to find a used one online or at a swap meet for much less than the brand-new list price. This manifold cost \$150. **22.** Air and fuel are mixed for the engine in an Edelbrock Performance Series 750 carburetor. It's used with a half-inch phenolic spacer that forms a heat barrier between the manifold and carb, keeping the fuel cooler. A taller spacer would be even more beneficial, but because the intake is relatively tall, too, hood clearance can be an issue. **23.** It may seem like a minor detail to mention, but crankcase ventilation is vitally important for optimal performance, ring sealing, and preventing oil leaks. So, a proper PCV valve and plumbing are part of the assembly.

23



24. A used, steel-based damper works fine for many builds such as this. It just needs to be carefully inspected for cracks or other damage in the rubber. **25.** Always use a new fuel pump. This Carter "Muscle Car" fuel pump (p/n 4589) is available just about everywhere and costs around \$25 from most outlets. **26.** The distributor is an off-the-shelf factory electronic unit, but the more important thing to note here is the oil pump driveshaft that runs it. Cheap ones that fail can kill the engine, so take the savings from the inexpensive oil and fuel pumps and invest in the best. The one from Mopar Performance (p/n 3412064) has a hardened shaft and strong gear.

24



25



26



ON THE DYNO

(peak numbers in bold)

RPM	HP	TORQUE (lb-ft)
2,000	233	611
2,500	295	619
3,000	355	622
3,500	421	632
4,000	483	633
4,100	500	640
4,500	535	625
5,000	572	601
5,400	585	550
5,500	584	557
6,000	571	500
6,500	546	441

27. With a production air cleaner on top, this 512-cu.in. RB stroker is a stealthy performer. With 38 degrees of total timing and running on premium pump gas, it produced 585 hp at 5,400 rpm and a whopping 640 lb-ft of torque at 4,100 rpm. And all for less than \$6,000.

SOURCES:

Dan Cook Racing
Waterford, Michigan
248-904-2150
dancook@dancookracing.com



BY THE NUMBERS

Engine block.....	\$400
Block machining and other machine shop work.....	\$300
Bearings and gaskets.....	\$250
Rotating assembly kit (crank, rods, and pistons)	\$2,600
Oil pump	\$85
Camshaft and lifters.....	\$250
Timing set	\$50
Cylinder heads with valves, springs, and locks installed.....	\$1,200
Rocker arms and pushrods (used)	\$25
Intake manifold (used)	\$150
Carburetor (used).....	\$125
Fuel pump	\$25
Distributor (used).....	\$40
Oil pan (with pickup)	\$170
Timing cover, valve covers, and other misc. parts (new and used)	\$195
TOTAL	\$5,865



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THE GREAT AAR HOPE

HOW THE FORD FLAG FELL UPON DAN GURNEY'S 1967 CAN-AM LOLA

WORDS BY MATTHEW LITWIN • PHOTOGRAPHY COURTESY OF MECUM AUCTIONS INC.

CREATED IN 1966, CAN-AM was the ultimate challenge for man and machine, using a hot rodder's recipe of unrestricted power, minimal weight, and few rules, which quickly elevated the series to legendary status before its brief golden era ended. During that time, a multitude of chassis were crafted to take advantage of the scant rules, including Dan Gurney's 1967 Lola T70 Mark IIIB Spyder pictured here.

Its story began in 1962 when Europe's racing governing body, the FIA, announced its World Sports Car Championship was being replaced by the International Championship for GT Manufacturers. Mid-engine Grand Tourers could only compete if production cars were publicly available, "at a minimum rate of one hundred identical units as far as mechanical parts and coachwork are concerned in 12 consecutive months." Yet a loophole via the Experimental Grand Tourer class—a forerunner to

today's Prototypes—kept the door open for race car chassis designers and builders, such as Eric Broadley's Lola Cars Ltd.

Founded in 1958, Lola had a winning reputation with its Mk1 and Mk1A multi-tubular chassis built for 1,100-cc and 1,500-cc Sports Racers categories (respectively), in addition to single-seat Formula Junior and Formula 1 cars. Broadley's experience with rear-engine Mk4 and Mk4A designs for F1 led to the advent of the Mk6 GT (chassis LGT-1), enabling Lola to enter the 1963 24 Hours of Le Mans.

The chassis was a monocoque design fitted with a Ford 289 V-8 backed by a Colotti Tipo 37 gearbox. Unfortunately, the car was supplied with gear ratios unsuitable for the high-speed Mulsanne Straight. It was retired after 15 hours, but not before attracting the attention of Ford Motor Company, which purchased the chassis for further testing, with technical support from Broadley.

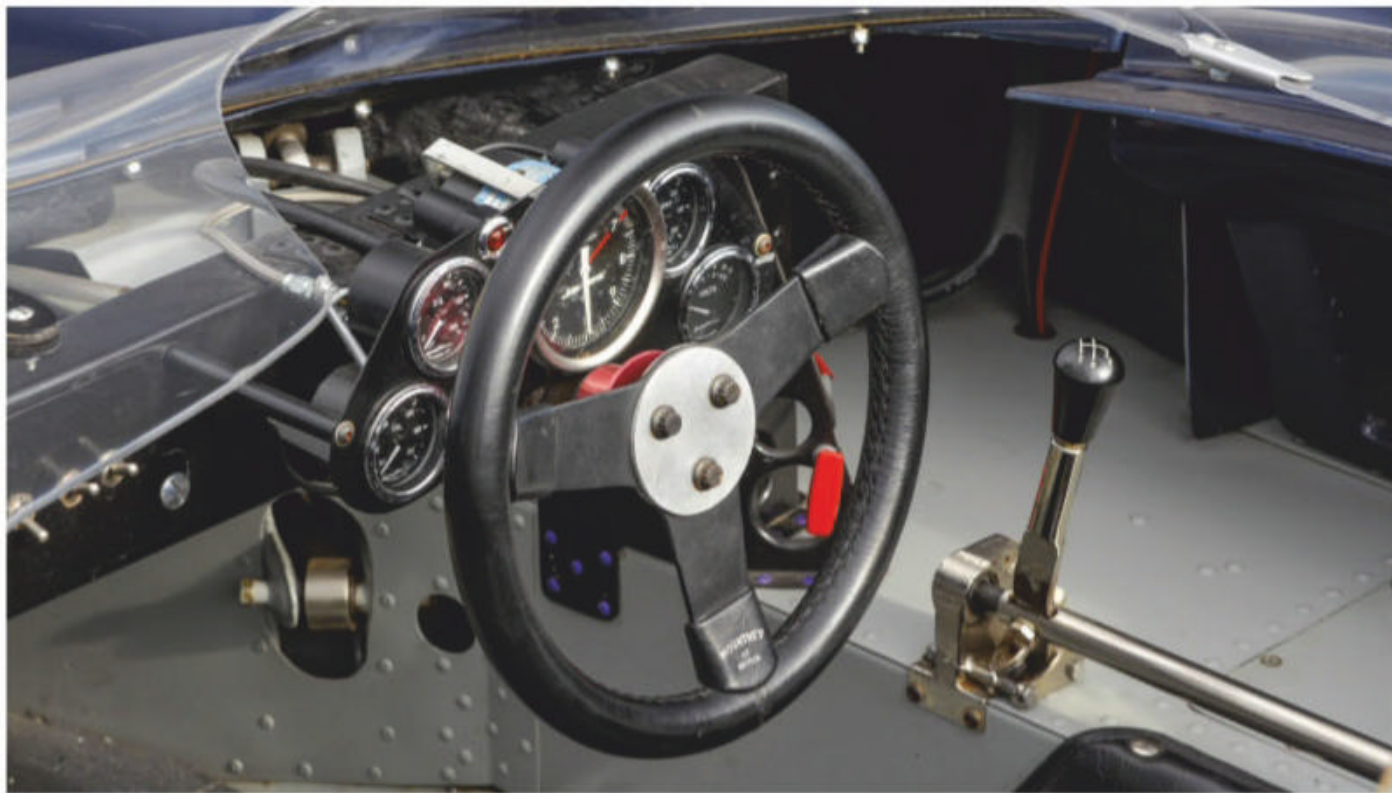
The Mk6 laid the groundwork for Ford's GT40, but Broadley left the program early and applied the monocoque concept to the Lola T70 for 1965. Able to accept big V-8s, the two-seat T70 featured a forward bulkhead that was the foundation for the suspension and steering systems. Dual rear extensions were used to support the engine, transmission, and



the rear suspension. Fuel cells flanked the monocoque center section, and a fiberglass body hid the ensemble. The lightweight T70, and subsequent T70 MkII, MkIII, and MkIIIB chassis, had an immediate impact on what became known internationally as Group 7.

Introduced by the FIA for 1966, Group 7 cars were “two-seater competition vehicles built exclusively for speed races on a closed circuit,” provided that each chassis was equipped with fenders, two doors, windshield, headlamps, and taillamps. Safety requirements were the addition of a roll bar and a dual-circuit braking system. There were no homologation rules or chassis/body dimensions to adhere to, nor were there engine restrictions, save for two: They had to have an electric starter and consume commercially available fuel.

The SCCA, USRRC, and the Canadian Automobile Sports Club (CASC) were ecstatic: unrestricted racing warfare! Shortly after the FIA's announcement came word of the collaborative effort between CASC and SCCA to bring Group 7 to North America. The Canadian-American Challenge Cup, or Can-Am, was born.





The 1966 Can-Am season consisted of six races, the first hosted by Circuit Mont-Tremblant. John Surtees, in a Chevy-powered Lola T70 MkII, won. Next was Bridgehampton, where Gurney won driving a Ford-powered Lola T70 MkII. MoSport followed, captured by Mark Donohue in another Chevy-powered Lola T70 MkII. Phil Hill was to add his name to the record books at Laguna Seca, driving a Chevy-powered Chaparral 2E. Surtees then won the last two races in his Lola at Riverside International Raceway and Stardust Raceway (in Las Vegas). Thoroughly trounced by Chevy, Ford concentrated its effort on the 1967 Can-Am season.

Ford's Le Mans effort generated experimental equipment, including an all-alloy, dry-sump V-8 under development for 1968 (in '67, the FIA disallowed it with a 3-liter-engine restriction). The exotic engine, nicknamed "Calliope," was believed to displace 423 cubic inches, but when tested in Ford's own G7-A chassis, the fuel-injected V-8 suffered from poor throttle response and its water seeping into its oil.

Then there was the G7-A chassis designed by Roy Lunn for Group 7. Based on the existing MkIV, an open-cockpit body had been crafted via wind-tunnel testing, including a radical dihedral wing intended to provide downforce while increasing lateral stability. But the chassis was 23-percent heavier than the competition, something the Calliope engine couldn't overcome. In testing,

the car was 14 seconds off the 1966 Las Vegas lap record.

As Ford abandoned the G7-A, hope rode with Holman-Moody's *Honker II* (HMM #123). Designed and built by Alan Mann Racing, H-M installed a new, lighter, high-performance, midsize V-8. Dearborn's design used the existing 289 as a foundation. Cast with a taller deck—9.2 inches—and punched to 351-cu.in., the engine utilized Tecalemit-Jackson fuel injection and cast-iron heads with raised ports and dropped combustion chambers, but the initial four-bolt head pattern led to early gasket failures. H-M dry-decked its block, yet as potent as the high-strung 351XE (experimental) engine was on straights, the *Honker II* suffered cornering instability. Even with Mario Andretti at the helm, the chassis was 17 seconds off pace and was withdrawn from the first race of the '67 season at Road America.

Likewise, Carroll Shelby had been crafting his own King Cobra for Can-Am. As with H-M's effort, Shelby's relatively unconventional chassis design led to significant handling concerns, and even dramatic failure during testing at Riverside. All this was compounded by cooling issues, so the team did not even make it to Road America.

This left Ford's hopes resting on Gurney and his All-American Racing Lola T70 MkIIIB (chassis SL75-122), one of four built. His chassis was fitted with the 351XE engine, but the block was modified to include

a full bank of Weber 48-mm carbs and a Moldex crank that boosted displacement to 378 cubes. The build also included Gurney-Weslake cylinder heads. An LG600 five-speed manual backed the block. Based on the previous season, it was believed the updated chassis would continue its Can-Am dominance.

Gurney and his Lola were impressive out of the gate at the first race at Road America, qualifying third. However, it was clear that the new Chevy-powered McLaren M6A was the chassis to beat. Chevy, in fact, powered all but four of the 32 starters. Denny Hulme won in the McLaren, while Gurney was sidelined with a broken transmission after 26 laps.

Bridgehampton was next on the schedule, where Gurney again qualified third. This time, the fuel injection failed after five laps. Can-Am then traveled to Mosport where Gurney started third behind the two McLaren team cars. Gurney was competitive until his clutch failed on lap 70. At Laguna Seca, Gurney qualified second, but his Lola overheated on lap 12. Starting on the pole at Riverside, he was out with a blown engine four laps later. The season finale at Las Vegas fared no better for Gurney, who retired his Lola with a bad vibration after qualifying third yet again.

Following the disappointing season, Swede Savage then raced the chassis in a pair of USRRC events during 1968, with a best finish of sixth at Riverside. The car was then sold to Vic Nelli, who—along with several hired guns—raced the Lola in SCCA and Can-Am races through 1971. Its best finish was Nelli's win during an SCCA regional contest at Orange County International Raceway on September 14, 1969. In 1971, the Lola was converted to a closed-coupe configuration and raced until 1996.

In 2010, this car was subjected to a two-year restoration, returning SL75-122 to its as-raced, 1967 AAR livery/configuration. It rolled across the block at Mecum's 2017 Monterey sale, bidding to \$350,000, though that wasn't enough to capture the Lola. ■

SWAP MEET

By Jim O'Clair

BUICK V-6 LOW OIL PRESSURE AT IDLE

Q: I just completed an oil change on my 1987 Oldsmobile Cutlass Supreme, which I have done dozens of times before, and the car starts and drives fine, showing 40 to 60 pounds of oil pressure cold and 30 to 50 psi when warm. The problem I am now experiencing is the oil pressure light comes on when the engine is warm and sitting in traffic at idle. I am pretty sure I did nothing to cause this by merely changing the oil, but I suppose it is possible. The engine has 62,000 miles on it, but I keep it up to date on preventative maintenance tasks and have never overheated the engine or let it run too low on oil. Is this something that occurs eventually in all 3.8-liter V-6 engines, or is there something I can do to keep the light from flickering on the dash at low idle? Would a thicker oil or oil additive help? I am using 10W-30 conventional oil now, but would consider a heavier viscosity or a synthetic oil if these are an effective fix?

Tyler Greenblatt
Via Facebook



A: Using a heavier oil may keep the light from flickering as often, but it does not solve the real problem. The engine in your Cutlass was made by Buick, and the oil pump system on Buick V-6 and V-8 engines (as well as many AMC V-8 engines) is susceptible to excessive gear and mounting surface wear. The oil pump is part of the front timing cover, which is an aluminum casting, and standard replacement of the pump involves swapping out a pair of gears and a pressure relief valve and a spring. However, since the same housing is reused, some of the pump's wear remains, primarily in both of its gear surfaces — the housing and the end plate (the back of the oil filter adapter).

This can cause a reduction in oil pressure and volume, which is most noticeable at the engine's lowest rpm: normal idle. On your 231-cu.in. V-6, you should be showing 12-15 pounds of pressure at idle (1,300 rpm) on a new or low-mileage oil pump.

Buick has been familiar with this low-pressure situation for many years and changed the oil light switch to a two- or

three-terminal switch with a fuel-pump cutout to prevent catastrophic pressure-related failures. When oil pressure drops below 9 pounds, the pump bypasses the oil filter, and if pressure continues to drop below 5 pounds, the oil pressure switch will shut off the fuel pump and kill the engine.

The best solution for this problem is to completely rebuild the oil pump by using a new front timing cover along with an oil pump rebuild kit, as well as a new oil filter adapter, which is the outer mounting surface for the gears. Installing the new gears against new mating surfaces should prevent any pressure or volume loss due to excessive clearance within the pump. Summit Racing offers a Melling high-volume rebuilding kit (p/n K-20IHV) that not only increases pressure at low idle, but also increases oil flow, which should also contribute to improving your low-rpm oil pressure. The kit comes with new gears, a new relief valve, several different springs for the relief valve, and the booster plate. Your choice of the springs is what makes the difference between stock oil pressure or a higher peak pressure. Melling also offers the oil filter adapter separately (p/n MFA6570HS).

TA Performance offers a new timing cover assembly (p/n TA_1530) for all non-turbo Buick V-6 and small V-8 (under 350-cu.in.) displacements that allows you to start with a new smooth housing surface where you will install your replacement oil pump gears. TA Performance also sells a high-volume oil pump repair kit and complete high-volume pump and timing cover assemblies ready for installation, including the petroleum jelly packing often used during repair kit installs.

- Summit Racing
800-230-3030
www.summitracing.com
- TA Performance
480-922-6807
www.taperformance.com

GALAXIE STEERING UPGRADE

Q: I have two 1963 Galaxies with manual steering. I would like to upgrade to power steering, but not to the original setup, which has so many parts. My 1964 T-Bird has a gearbox that the hoses from the pump go into, and it doesn't require much

else. Will this steering gearbox or another gearbox configured in this way work on my Galaxies as a bolt on? I look forward to seeing what you come up with and thank you.

Erik Miller
Via email



A: The Thunderbird integral power-steering box you reference was only used on the T-Bird and Lincoln during that period, and it doesn't appear that it would be a bolt-in addition to the standard fullsize Ford. The mounting flange is different, and the steering shaft connection also appears to differ. Those items could probably be adapted, but there is an aftermarket alternative solution that would be simpler.

Borgeson Universal offers a compatible power-steering box that can be used with an existing manual steering system or the old Bendix-style power-steering system with the addition of a drag-link adapter to tie into either system. Borgeson's part number for the gearbox is 800115, and it mounts right where the original box was located. The unit is plumbed for 16 mm x 1.5 threaded power-steering hoses, and mates with their GM-style late-model power-steering pump, bracket, and hoses. There are several pump and bracket assemblies offered depending on your engine: small-block, Y-block, or FE. Hose assemblies are also listed, as is the drag-link adapter (p/n 990004), which is critical to complete the installation. You will have to cut your existing steering shaft and adapt it to accept the new box, using a spline adapter and a rag joint, which Borgeson also sells. Ford FE engines will also require a two-groove crankshaft pulley to complete installation. Complete instructions are available on the company's website and in the shipping box with the conversion unit. All parts are sold separately. Borgeson products are also available through Summit Racing.

- Borgeson Universal Company
860-482-8283
www.borgeson.com
- Summit Racing
800-230-3030
www.summitracing.com

All discussions in this column regarding repairs, conversions, parts swaps, etc. are offered as suggestions. Performing any such work should be accompanied by thorough research to verify proper parts compatibility and procedures to achieve a safe, functional result. We welcome any and all questions related to suspension, brake, engine, differential and transmission upgrades. Email us at swapmeet@hemmings.com or submit inquiries to our Facebook page, www.facebook.com/HemmingsNews or our website where comments can be made at the bottom of dozens of previous Swap Meet articles posted there.

ROUGH RIDER

Q: I have a 1947 Dodge with a Chevy 350 V-8 and a TH350 transmission. I put lowering spindles with discs on the front and a four-link at the rear. This left ride quality poor at best. I installed an airbag system on the car to try to improve the ride — no luck.

With 35 psi of air, it is stiff; at 20 psi of air, same thing. I gave up and sent the car to two different shops. They charged a lot of money and did nothing to improve the ride.

I currently have it at a shop that is working with me. We are both guessing at what to do. No matter what we try (relocating bags, adjusting solenoids, different shocks), it comes out the same. I can feel a dime when driven over. Any help would be greatly appreciated.

Chuck
Via email

A: *Ride quality can be very elusive to achieve with a modified car, especially one from the 1940s. It is almost a hit-or-miss deal.*

One thing that you do not mention is the tires and wheels on the Dodge. I would assume the car has a hot-rod look, and today that usually means big rims and low-profile tires along with polyurethane bushings in the suspension. The sidewall of the tire acts like a cushion, and when you decrease that area, ride quality degrades greatly.

Many years back, I was a test driver for BMW of North America. One of the test vehicles was a 750iL, which was a large, long-wheelbase V-12-powered sedan at that time. We put about 10,000 miles on the test car as-built, and then it was converted to a prototype M suspension (the M version of the 7-series never came to market in the U.S.).

The car handled remarkably for the boat that it was when the road was smooth, but not so good when the pavement was uneven or bumpy. But the suspension, and especially the low-profile tires, completely ruined the car. It rode worse than a dump truck, and had squeaks and rattles everywhere that were not present in the stock configuration. I hated that car!

What I would suggest is, if possible, that you borrow some rims with tall tires on them, such as those with a 70-75 aspect ratio, and then see how it rides. It will never be like a Lincoln, but it should be much better.

If so, then the decision is yours to make whatever changes needed or settle for how it is.

MORE PONTIAC OIL CONFUSION

Q: I read with great interest your response to oil capacity for Pontiac V-8s. I love your column and don't think I've ever disagreed with any answer you've given, until now.

It may boil down to the capacity the oil pan manufacturer says to use, but, if I only do a 6-quart oil change with filter, my dipstick also reads 1 quart low.

Even more troubling is that when rounding the cloverleaf exit near my work, I can see the oil pressure gauge begin to fluctuate two-thirds of the way through it. I'm also lucky enough to live near Road America. I've run into an oil starvation problem doing spectator touring on the track if I only use 6 quarts. I now fill according to my dipstick and the problem in both of those instances is greatly improved.

My son and I are building a 400 with a Canton oil pan for future use. We bought the dipstick from Canton for the pan, but still have the provision on the block. We're going to see if they match when we get it on the road and hopefully have an answer to the great Pontiac oil capacity problem!

Scott A.
Via email

A: *Thanks so much for reading my column and for the kind words.*

I agree with you 100 percent that the capacity of the oil pan would change with an aftermarket design and those instructions should be followed. But, if I remember correctly, the letter that many readers wrote to me about was a stock Pontiac pan. The confusion was about the stated volume of the oil pan based on the year of the engine.

Another area that many do not talk about when switching to an aftermarket pan or even a different oil pump and

pick-up, is the distance from the screen to the bottom of the oil pan. You need to measure this before you put the pan on, especially if you changed the pump. Most engine builders like around 1/4-inch or less from the screen to the pan floor, with many setting it up for 1/8-inch. I would not be surprised if the pick-up is too high on your engine since you are seeing a pressure drop going around the cloverleaf on the highway.

MISSING FUEL

Q: In the February 2019 issue, a reader had a question as to where his fuel was going, causing hard starts when the motor is cold. I believe I have the answer.

Many of my friends and I had the same problem. It is the new fuel — it has methanol in it, and it evaporates much faster than the old leaded fuel.

Most, if not all, of the carburetors are vented to the atmosphere, causing the fuel to evaporate sooner than normal.

What I did for a fix was to install a small inline electric fuel pump in the fuel line. These can be bought at Auto Zone or Summit. Then, before you start the engine, turn the pump on for 15 seconds. Then turn it off and start the car as usual. This works and saves a lot of grinding on the starter.

Thanks,
Budd Gilbert
Somewhere in Michigan

A: *Thanks so much for writing in with your thoughts.*

As I have said many times in this column over the years, modern fuel evaporates at a quicker rate than the fuels of years ago. All carburetors have a bowl vent, since that is the basis of how they function.

The gasoline today is mixed with ethanol, not methanol, the latter being wood alcohol and what is used in alcohol dragsters. Ethanol, for the most part in the U.S., is corn based.

I always tell the readers to confirm that the carburetor is running dry before they do anything else. Many people do not know how to cold start an engine that has a carburetor with an automatic choke and just assume the fuel is leaking out.

All my gasoline-powered equipment on our farm has no problem at all with modern gasoline after sitting unused for a while.

If it is determined that the fuel bowl is empty, then I always suggest simply taking the air cleaner lid off and spraying some carburetor cleaner into the venturi. The engine will start right up on the cleaner and the higher rpm will fill the bowl quickly. This is a simpler fix than an electric fuel pump, though nothing is wrong with that approach. Since these cars are not driven often, you would only need to use the carburetor cleaner on the initial start after a long hiatus.

Most people with restored cars may not like adding an electric fuel pump.

BOOST ME UP!

Q: I live in southern California, where we only have 91 octane as our super high test. I listened to your podcast about fuels, so I have an understanding of what the octane rating numbers mean.

I have a 1999 Firebird Formula with 11.8:1 compression and a 2018 Mustang GT with a 5.0-liter and 12.0:1 compression. Both cars are computer controlled and both are reducing timing due to the low octane rating to prevent pinging.

When I go to the auto-parts store, I see different brands of octane boosters. My question is, do these products work and can there be any damage to the engine after prolonged usage?

I listen every week and I'm getting a wonderful education about all things mechanical.

Tom
Via email

A: Thanks so much for listening to my podcast and I am glad to hear that you are learning from it.

There is no concern when using a street legal octane booster since it will not damage the oxygen sensor, catalytic converter, or injectors. The only thing that gets hurt is your pocketbook from buying it.

I would like to know if the two engines are audibly detonating. How are you confirming detonation, or are you just making that assumption?

The cylinder heads on both the Firebird and the Mustang are very octane tolerant, even in desert heat.

Regardless, feel free to use an octane booster, you will not hurt anything.

TACH IT OUT!

Q: I have a 1967 GTO that I bought in March of 1968. I swapped out my distributor for an HEI that I got at a swap meet, which had a black cap on it. The guy also had a blue cap, so I bought it, too.

I swapped out the disks but my stock factory tach will only go up to 1,300 rpm. I have another factory tach that I tried, and it too would only go to 1,300 rpm. I swapped out an Auto Meter tach and that worked fine.

I started making calls to Summit Racing, Jegs, NPD, lots of other places, including DUI. I'm about at wits' end. A guy in Michigan said if I send my HEI and my stock factory tach, he might be able to get it to work, no guarantee. DUI said they don't know why it doesn't work.

The distributor that I bought doesn't have any numbers on it. I don't know if this thing is an aftermarket job? The only other thing I can think of is, maybe my factory tach is not compatible to a HEI disk. If you have any suggestions or ideas, I'm all ears.

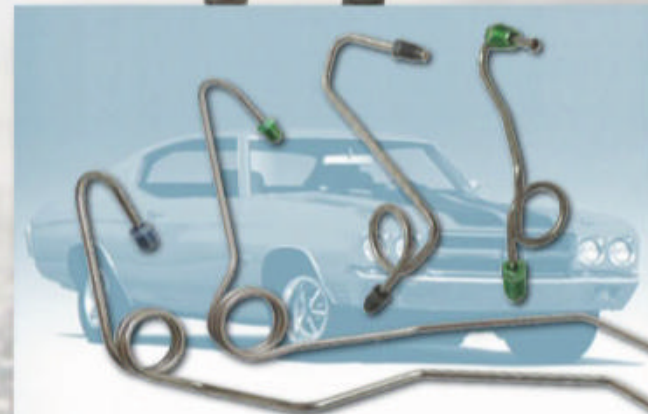
George
Via email

A: Many modern tachometers have different circuitry but should still work with HEI. Your 1967 tachometer most likely will not.

I am not intimate with the internal workings of a factory tach from that era, but, as you have found, there are many people who are experienced in making the necessary changes. But before you send that tach off to a specialist, you may want to try adding a tach "filter," a small electrical item that looks like the condenser of a breaker-point set. Many auto gauge and wiring specialists offer these, and should be able to offer additional insight. ■

Send your troublesome tech questions to: askray@hemmings.com or Ask Ray, P.O. Box 2000, Bennington, VT 05201

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PRODUCT TEST:

KNIPEX ALLIGATOR PLIERS

KNIPEX TOOLS • WWW.KNIPEX-TOOLS.COM • 847-398-8520 • \$62.79 (HOME DEPOT)

Car folk tend to be tool nerds, including a number of us at Hemmings. In the never-ending quest to expand and upgrade the contents of the toolbox, we recently acquired a three-piece set of pliers from German toolmaker Knipex, a company that can trace its roots back to 1882. We were intrigued when we came across a description of Knipex “Alligator” pliers, which are described as conventional water-pump pliers with an improved design that provides increased clamping on the workpiece with reduced hand force. The pliers also have hardened teeth and an interesting design that has one handle passing through the other, rather than the two component pieces being stacked side-by-side. That is said to provide increased stability of the jaws, and yet, the overall width of the tool is quite narrow.

Knipex is a respected brand in Europe, and the company has a North American division, so the tools are officially distributed on our shores. They are readily available at retailers like Home Depot and Lowes, or

popular mail-order outlets, like Summit Racing. We treated ourselves to a three-piece set of Alligators (p/n 00 20 07 US1) that includes a 7-, 10-, and 12-inch pair. They will feel light compared to traditional quality-brand American-made pliers, but that is said to be intended, to make them easier to manipulate.

The grip is indeed impressive—the angled jaws seem to grasp things more positively and, with nine jaw positions, the pliers are very adaptable to various fasteners or surfaces (these are also intended to grip rigid tubes, pipes, and more). The pinch guard is a nice feature, too, to keep a slipped grip from smashing your fingers. We wouldn’t necessarily say that these will replace your favorite pair of large, heavy-duty slip-jaw pliers for brute-force work, but the Knipex design does seem to work quite well for holding fasteners and other things that can be challenging. The pricing is reasonable for a quality tool, and they do appear to be very well made, plus they carry a lifetime guarantee. — **Terry McGean**



SUPER BEE LED MARQUEE

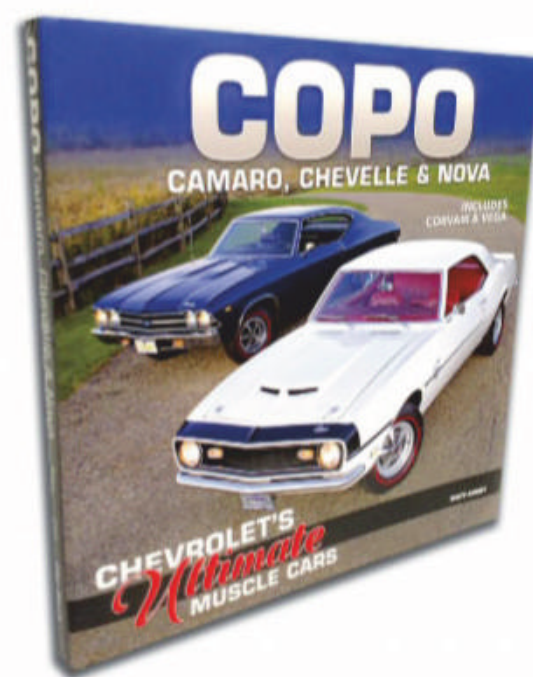
SUMMIT RACING • 800-230-3030 • WWW.SUMMITRACING.COM • \$24.99

Does your marque affiliation run in the Mopar direction? Then you'll appreciate this tribute to Dodge's Scat Pack, and the member that contributed its cartoon logo to "The Hive": the Super Bee. This stylish, inexpensive LED marquee sign (item SDF-158864) celebrates that B-body with a neon-like glow provided by energy-efficient LED lights powered by four AA batteries (not included) or an 18-inch mini-USB cord. The lightweight plastic frame has keyhole slots for easy hanging, and it's sized 17 x 9 inches. It can be delivered to your home or picked up in a Summit Racing store in Georgia, Nevada, Ohio, or Texas.

COPO CAMARO, CHEVELLE & NOVA

CARTECH PUBLISHING • 800-551-4754 • www.carttechbooks.com/COPO
\$44.95 (HARDCOVER); \$39.95 (PDF E-BOOK)

Chevrolet's Central Office Production Order was established to permit special orders of taxi companies, police departments, and other specifically equipped fleet vehicles. But in the 1960s, clever dealers found this process could be used to spec street and race cars with equipment beyond that officially allowed, and Chevy's biggest performance legends were so created. Pennsylvania dealer Yenko Chevrolet started with the Corvair-based Stinger, and moved on to 427 Camaros, Chevelles, and Novas, ending that era with the turbocharged Vega Stinger. Other performance-focused dealers came up with their own COPO formulas to create competitive hi-po models, and this 204-page hardcover by Matt Avery, subtitled "Chevrolet's Ultimate Muscle Cars," covers them all, including the latest COPO Camaros. It's well-researched—including personal interviews and appendices covering 1968 Gibb Novas and 1969 ZL-1 Camaros—and an exciting read that will appeal to all Bowtie performance fans.



1970 MERCURY COUGAR ELIMINATOR

HEMMINGS MOTOR NEWS • 800-227-4373
WWW.HEMMINGS.COM/STORE • \$89.95

The Eliminator was Cougar's most hardcore performance variant during the height of the muscle era, but its most uncharacteristic engine option (for a Mercury)—and the one most rarely chosen—was the SCCA competition-proven Boss 302. *HMM* ran a cover story on Sonny Morgan's restored Competition Yellow 1970 Boss 302-powered Cougar Eliminator in October 2004, and that's the latest *HMM* cover car to be honored by Ertl Collectibles' American Muscle line, from Auto World. This 1:18-scale die-cast (item AMM1155) is officially licensed by the Ford Motor Company, and the level of detail it provides is sure to please Blue Oval fans.

From the tiny, spring-equipped hood hinges and legible engine decals up front, to the flock carpet and Hurst shifter in the cabin, to the accurate patterned mat under the full-sized spare in the trunk, this adult collectible is a fine tribute to one of the most desirable pony cars ever built.



STRAPPED

MAC'S CUSTOM TIE-DOWNS • 800-666-1586

WWW.MACSCUSTOMTIEDOWNS.COM • STARTING AT \$249.95

Tie-down straps are essential when transporting your car with a trailer, and it's important to have something durable that won't damage the vehicle. This new Pro Pack kit from Mac's (p/n 511616) comes with straps, ratchet assemblies, wraps, and sleeves. Each of these straps will protect your vehicle's finish, yet each can handle 10,000-pound capacities. Featuring an easy-release ratchet handle that you can move as far away from the vehicle as possible, the straps are designed to be easily secured and released. Sleeve protectors are also provided to give each strap extended life. The straps themselves are said to be made of the highest stitch count available, double some of the other straps on the market. They're available at 6- or 8-foot lengths, 24- or 40-inch axle strap lengths, and in six different colors. Each ratchet has three available styles—direct-hook, sewn fixed end, and direct hook with chain extensions—and each kit comes with a heavy-duty storage bag.

TIRE TIME

COKER TIRE COMPANY • 800-251-6336 • WWW.COKERTIRE.COM • \$202

New BFGoodrich tires are now available for authentic muscle-car restorations. The 7.75-14 redline tire was a popular size used in the mid-1960s, and it is now available to ship. Each tire uses bias-ply construction with four-ply polyester cords. The 3/8-inch redline was built into the mold—not added later. Used on Pontiac, Chevrolet, Oldsmobile, Mopar, and AMC models, among others from 1965-'69, the redline tire was a popular option for the special trim levels, such as the GTO, 4-4-2, and Road Runner. The tires are period-correct and look good on base models as well. Plus, each tire is DOT approved.



GLASS BLASTER

AMSOIL • 800-777-8491 • WWW.AMSOIL.COM • \$4.85/19-OUNCE CAN

This professional-strength glass cleaner (p/n AGCSC-EA) will effectively cut through grease and grime, which is perfect after a day at the track or if you are caught in nasty weather; just spray and wipe with a cloth or paper towel. The foaming action quickly cuts through filth and does not drip or run, staying where you spray it. It also won't leave any streaks or haze, and the ammonia-free formula is safe on all glass, including tinted windows.

TEMPORARY PROTECTOR

**ROAD WARRIOR PLUS • 856-441-2628 • WWW.ROADWARRIORPLUS.COM
\$29.99/8-OUNCE KIT WITH APPLICATOR**

You can now add protection to your paint with a temporary solution that is great for road trips, long drives to concours car shows, and track events with this new, environmentally safe protectant. The liquid rolls on white and turns clear when dry, forming a flexible film that is thick enough to protect your vehicle from bugs, rock chips, dirt, dust, tar, and rubber. It will maintain your paint's brilliance, and application is easy. Visit Road Warrior's site for a full demonstration. The coating can be used on freshly cured painted surfaces, and is safe to use over vinyl accents or decals. When removed, there is no adhesive residue left behind.





TACH-TICS

DIXIE RESTORATION DEPOT • 877-243-4943 • WWW.DIXIERESTORATIONDEPOT.COM • \$39.95

A new and direct-fit tach filter is now available for G-body cars with factory tachometers. It's available for the 1978-'88 Monte Carlo, Malibu, and El Camino, and adaptable to other G-body vehicles. The filter's silver cylinder can be mounted near the ignition coil. The item will keep your tach readings accurate to enhance racing efforts or highway cruising. It is now in stock and ready for immediate shipping from Dixie. Visit the company's website for more details.

CABINET APPOINTMENT

PIT PAL PRODUCTS • 888-748-7257 • WWW.PITPAL.COM • \$214.99

This deluxe trailer cabinet (p/n 320A) is perfect for the garage, shop, or trailer, providing shelf space for up to 20 quarts of oil, spray bottles, aerosol cans, and more. The bottom features two paper towel holders and an easy-to-clean 16 x 24-inch fold-down work tray. Each aluminum cabinet is TIG welded for durability and long-lasting performance. Dimensions are 25 inches wide x 32 inches tall x 6.75 inches deep, and each cabinet weighs 40 pounds. Visit Pit Pal's website for assembly instructions and images of multiple applications.



RING-AND-PINION SETS

EATON • 800-328-3850 • WWW.EATON.COM • INQUIRE FOR PRICE

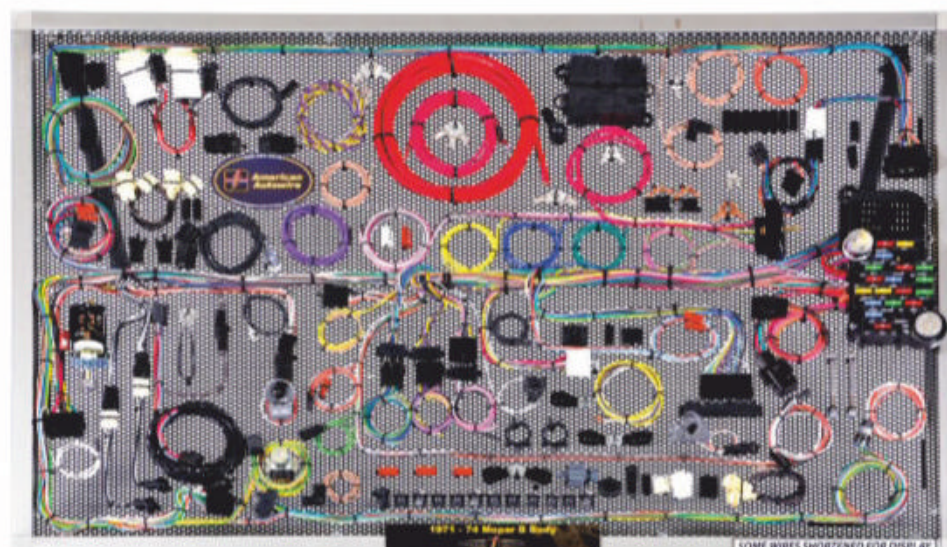
New aftermarket performance ring-and-pinion sets are now available from Eaton and offer a variety of ratio options to increase your car's performance. The gear sets come in two varieties: street and competition. Each is available in an optional isotropic Super Finish, which coats the gears with a polished surface to minimize friction, improve wear resistance, and increase oil retention. Friction reduction is estimated at 3-5 percent. The ring-and-pinion gear sets are available in a wide range of axle ratios for Chrysler, Dana, Ford, and GM. The sets provide the best in gear meshing, reduced stress, and smooth engagement, while each unit features rolled splines for longer life and heat-treated steel for added durability. Visit Eaton for your desired application.

B-BODY UPDATE

AMERICAN AUTOWIRE • 800-482-9473

WWW.AMERICANAUTOWIRE.COM • \$899

If you're looking for a complete bumper-to-bumper wiring upgrade system for your 1971-'74 Mopar B-body, this full kit (p/n 510289) should suit your needs. This kit was designed to address many of the wiring pitfalls commonly encountered with these models, plus it includes custom features to facilitate installation including extra-long leads, along with original-style sockets, switches, and terminals. Adapter terminals are also available in the kit to accommodate variations found in certain systems. The instrument cluster wiring is designed with a "cluster harness disconnect" system that is compatible with the factory instruments as well as aftermarket gauges from Classic Instruments, Dakota Digital, Autometer, VDO, and others. There are too many features to list, so be sure to contact Autowire for full specifications of this new update kit.



■ AUCTION ACTION



2018 PEBBLE BEACH WEEK: AUCTION ROUNDUP PART 2

RM SOTHEBY'S AND GOODING & COMPANY STEAL THE MONTEREY SALES HEADLINES

WORDS AND PHOTOGRAPHY BY MATTHEW LITWIN

THIS MONTH, we're wrapping up our coverage from the sales smorgasbord during Monterey Meet Week, and what finer way to do so than with muscle car highlights from what turned out to be the headline makers: RM Sotheby's and Gooding & Company. We'll break things down on an individual sale basis momentarily, but as we go into those details, keep this in mind: The combined take from these two auctions alone produced a mind-blowing \$274.4-million-plus result.

Let's start with Gooding & Company. The California-based firm has the distinction of being the official auction house of the Pebble Beach Concours, and therefore sets up at the resort's prestigious Equestrian Center. This year's event was held on August 24-25 and bidders were greeted by a catalog brimming with 147 vehicles, of which 123 sold (or 83.7 percent) for a skosh more than \$116.5 million. In the process, 23 records were set. The topseller was

a 1935 Duesenberg SSJ at \$22 million. Next was a 1958 Ferrari 250 GT Tour De France Berlinetta that realized \$6.6 million, followed by another 23 lots that achieved seven-figure sales. Topping the muscle car genre was a 1965 Shelby G.T. 350 that realized \$379,500 (good for 59th overall). For full results, visit www.goodingco.com.

The newly renovated Portola Hotel and Spa welcomed Canada's RM Sotheby's for its annual Monterey sale, which was also held on August 24-25. The company brought together a 150-lot catalog, of which 125 sold (83.3 percent) for more than \$157.9 million. Accounting for part of that total was a 1962 Ferrari 250 GTO (\$48,405,000), the one and only 1963 Aston Martin DP215 Grand Touring Competition Prototype (\$21,455,000), and the Le Mans podium-finishing 1966 Ford GT40 Mk II (\$9,795,000). Other individual records were set. For complete results, visit www.rmsothebys.com.

THE NUMBERS

GOODING & COMPANY

Total Sales: \$116.5 million

Top Muscle Car Sale: 1965 Shelby G.T. 350, \$379,500

RM SOTHEBY'S

Total Sales: \$157.9 million

Top Muscle Car Sale: 1966 Ford GT40 Mark II, \$9,795,000

UPCOMING AUCTIONS

GOODING & COMPANY

March 8: Amelia Island, Florida

August 16-17: Pebble Beach, California
310-899-1960 • www.goodingco.com

RM SOTHEBY'S

March 8-9: Amelia Island, Florida

March 29-30: Ft. Lauderdale, Florida

May 29-June 1: Auburn, Indiana

519-352-4575 • www.rmsothebys.com

LEGEND

Condition: #1 = Excellent; #2 = Very Good; #3 = Average; #4 = Poor; #5 = Major Project

Reserve: Minimum price owner will accept

High Bid: The highest offer made (but vehicle did not sell) *

Selling Price: What the vehicle sold for *

Average Selling Price: Average market value of vehicles in similar condition

*All prices shown include a buyer's premium on sold lots. Unsold lots include only the highest bid, when available.

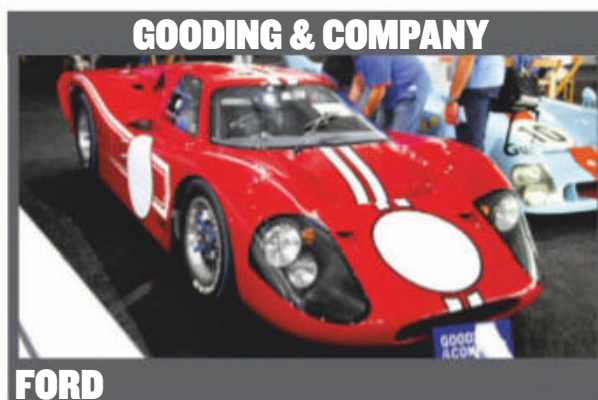


GOODING & COMPANY

CHEVROLET

YEAR: 1960 **RESERVE:** None
MODEL: Corvette **SELLING PRICE:** \$143,000
CONDITION: Restored/#2+ **AVG. SELLING PRICE:** \$147,000

The last car to cross the block on the first evening of the sale was this attractive 'Vette, offered at no reserve. Featuring a numbers-matching, 270-horse 283 (dual four-barrel) backed by a four-speed manual, it was advertised as sporting an "older restoration" that had been bestowed with five NCRS Top Flight awards and Bloomington Gold certification in 2017—high accolades among fellow owners. Our list of demerits was short: a potential rub mark left by the removable top, a hint of rust on the front license plate bracket, and yellowed whitewalls; the latter the most glaring and easiest to correct. An admitted show car for 35 years, this was well-bought.



GOODING & COMPANY

FORD

YEAR: 1967 **RESERVE:** Undisclosed
MODEL: GT40 Mk IV **HIGH BID:** \$1,750,000 (not sold)
CONDITION: Restored/#1- **AVG. SELLING PRICE:** \$5,500,000

A highlight of this Mk IV GT40 was that it was raced in Can-Am in 1969-'70 by legends Jack Brabham, Vic Elford, George Follmer, David Hobbs, Peter Revson, and NASCAR standout LeeRoy Yarbrough. How was that possible? This was chassis J-10, sold to team owner Charles Agapiou for the pricey sum of \$1 (according to records) when FIA regulations nullified its entry at Le Mans. Prepped for Can-Am, its best finish was second at Japan's Fuji 200 with John Cannon at the wheel. Wrecked in '70, it was ultimately restored to full Mk IV specs (using body molds from chassis J-6), and completed in 2017 sporting 1967 livery. The sale estimate started at \$2.5 million.



GOODING & COMPANY

SHELBY

YEAR: 1965 **RESERVE:** Undisclosed
MODEL: G.T. 350 **SELLING PRICE:** \$379,500
CONDITION: Restored/#1- **AVG. SELLING PRICE:** \$500,000

To put 1965 Shelby Mustang numbers into perspective, just one percent of total pony production was sent to the Texan for upgrades, or 521 to be exact. This one then went to Hayward Motors, in California, who sold it in 1966 to its first owner. The G.T. 350's second owner added a 34-gallon gas tank and an aftermarket rear bumper so that it could be used to tow his race car across the western circuit. Five well-documented owners later—nearly all Californians—the Shelby was restored to original specs by its sixth owner after its 1996 purchase. We caught a hint of orange peel paint in tight-to-get-to locations; terribly minor nits. It sold within estimate.



GOODING & COMPANY

FORD

YEAR: 1966 **RESERVE:** Undisclosed
MODEL: GT40 Mk I **HIGH BID:** \$2,800,000 (not sold)
CONDITION: Restored/#2- **AVG. SELLING PRICE:** \$4,200,000

Is there a GT40 that is not significant? No. Even the 31 road cars made in 1966 are monumental. Finished in Warwick Green when completed, this one was one of six assigned to Shelby American for field promotion under approval of FoMoCo. In 1967, the Ford was sold to its first private owner, who painted it light metallic blue. Owner three painted it green and later put it in a ditch, damaging the nose. The sixth owner then embarked on "an incredibly accurate and fastidious restoration" in the Eighties that repaired the damage and retained the numbers-matching drivetrain, though at the sale the body was painted red. Road use since produced noticeable wear.



GOODING & COMPANY

FORD

YEAR: 1970 **RESERVE:** Undisclosed
MODEL: Mustang Boss 429 **HIGH BID:** \$220,000 (not sold)
CONDITION: Restored/#2 **AVG. SELLING PRICE:** \$345,000

The Boss 429 was a bit of a welcomed sight in that it wasn't a performance Mustang adorned with pit vipers and "G.T." callouts. Three documented owners, roughly 22,000 miles, and a thorough restoration were highlights of this Kar Kraft special created to homologate the "Shotgun" 429 below its hood for NASCAR competition. Even the Grabber Green was its factory hue. Just 499 were built in '70, making this a bona fide hi-po rarity. Demerits were rare, too: a bit of orange peel paint around window trim and the back of the ducktail spoiler, and quarter-window trim starting to pit. These can't possibly be the reasons the big-block Boss didn't sell.



GOODING & COMPANY

CHEVROLET

YEAR: 1963 **RESERVE:** None
MODEL: Corvette **SELLING PRICE:** \$195,250
CONDITION: Refurbished/#2- **AVG. SELLING PRICE:** \$155,000

Here was another "well documented" Corvette, yet the catalog failed to hint at whether the split-window two-seater had been restored or not. Powered by a fuel-injected 327 (rated for 360 hp), it had admittedly been subjected to mechanical "sorting" by marque specialists. We sided with "refurbishment" in our assessment and took note of the left door that was obviously intruding upon its neighboring quarter panel. Some tarnished trim was present, the hood was slightly askew to our eyes, and scratches were sprinkled on the A-pillar trim. This NCRS award winner, though, was offered at no reserve, and sold well above the high \$170,000 estimate.



YEAR: 1932 **RESERVE:** Undisclosed
MODEL: "404 Jr." roadster **SELLING PRICE:** \$324,000
CONDITION: Restored/#1- **AVG. SELLING PRICE:** N/A

If you didn't know any better, you'd think this was just another '32 Ford hot rod. It wasn't. Known as "404 Jr.," this roadster is a California legend. Built by the Berardini Brothers, this modified Ford initially hid a well-tweaked 314-cu.in. flathead Ford V-8. It was almost unbeatable under their ownership through 1955, and its dominance continued under the care of other stewards, while it received constant contemporary upgrades. It even set a world record in '61. Driven more than 185,000 miles, it was restored to original livery in 2004 and won an award at Pebble Beach in 2007. The sale was a bit of a bargain, as it had been estimated to sell north of \$400,000.



YEAR: 1965 **RESERVE:** Undisclosed
MODEL: G.T. 350R **SELLING PRICE:** \$720,000
CONDITION: Restored/#3 **AVG. SELLING PRICE:** \$769,000

This Shelby left its mark globally. One of 36 350R models built, it was sent to Toronto, Canada's Comstock Racing team in Wimbledon White paint with no stripes. The team refinished it in its white-with-green-stripes scheme and immediately set it loose up north; the Shelby won in just its second outing. Sold a year later, it returned to the Lower 48, was restored to original Comstock livery in 1996, was vintage raced here and across the pond, and was recently a formal resident of Switzerland. In Monterey, we saw a cracked windshield, cracked fender and hood paint, and a fair amount of front-end race wear. We can't blame the owners — we'd have raced it, too.



YEAR: 1963 **RESERVE:** Undisclosed
MODEL: Cobra 289 **HIGH BID:** \$775,000 (not sold)
CONDITION: Restored/#2+ **AVG. SELLING PRICE:** \$1,200,000

Meet CSX2095: a 289 Cobra completed in 1963 wearing red paint with a black interior. By 1974, it was refinished in dark blue with a red leather gut, and a later dual-quad 289 engine had replaced the original. In '81, the Cobra was modified with wider fender flares to accommodate wider 7.5-inch wheels, and black paint had covered the bodywork. Then in 2003, it was resold and sent to a specialist who restored the fender flares. A set of 6-inch wire wheels completed the work, and it was driven regularly thereafter. Its presentation was stunning. Only the front and rear emblems showed some age. Was the sale hindered by the wheels and radials?



YEAR: 1966 **RESERVE:** Undisclosed
MODEL: Cobra 427 **SELLING PRICE:** \$995,000
CONDITION: Refurbished/#1 **AVG. SELLING PRICE:** \$1,750,000

Honestly, there's not enough room here to convey the tale of this 427 Cobra, CSX3102. Sold to its first owner in Minnesota, it was promptly wrecked. The second owner reached out to Shelby American and obtained the body from CSX3005 (a chassis originally intended to race at Le Mans but parted out when the attempt was cancelled). The Cobra's saga does not stop there, as its history is festooned with SAAC event appearances, but it's probably best known for its starring role as a prop in a menswear promotional poster. It's a well-known example, and the only fault we jotted down during the sale inspection was that the original engine had been swapped for a "correct-type replacement."



YEAR: 1998 **RESERVE:** None
MODEL: Viper GTS-R **SELLING PRICE:** \$86,800
CONDITION: Original/#1- **AVG. SELLING PRICE:** N/A

Amazingly, only one Dodge could be found at the sale, and this was it. Back in 1997, the France-based ORECA Racing teamed up with Dodge, created the GTS-R, and set its sights on the FIA World Championship. The collaboration would accomplish that and more, becoming the first American manufacturer to win at Le Mans (in '97) since the GT40 three decades prior, and win the FIA title four times through 2002. Pictured here is the street homologation required by the FIA, complete with an 8-liter V-10 and GT2 aero package. Just 100 were built in '98, and this was #72, sporting 17,000 nearly as-new miles. It sold within estimate.



YEAR: 1963 **RESERVE:** None
MODEL: Corvette Z06 **SELLING PRICE:** \$187,600
CONDITION: Restored/#2- **AVG. SELLING PRICE:** \$415,000

We're still trying to figure out the tremendous disparity between the book value for this 'Vette, and the selling price, which landed within the presale estimate. The Chevy's equipment certainly warranted attention: One of 199 built with the Z06 option, it had the N03 coded 36-gallon fuel tank (of which 63 were built that year), and aluminum wheels. Icing on this go-fast cake was the 360-horse fuel-injected 327 and four-speed combo bolted to the chassis. According to known history, it was crashed in 1970, and having been repaired and restored, the car ended up with a replacement engine. Age was present, particularly the weather seals and fuel cap.



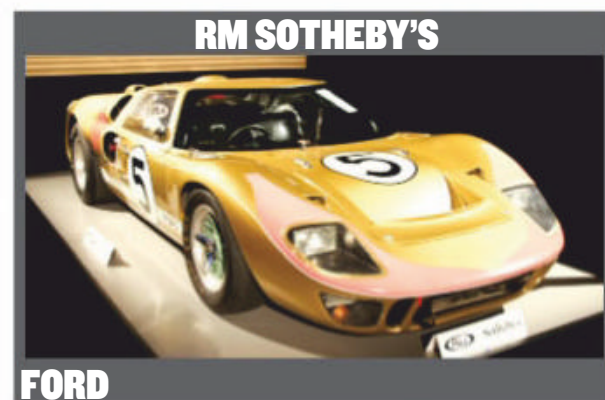
CHEVROLET
YEAR: 1965 **RESERVE:** None
MODEL: Corvette **SELLING PRICE:** \$81,200
CONDITION: Restored/#1- **AVG. SELLING PRICE:** \$137,000

Here was another Corvette that landed within estimate yet undersold average values. Granted, that potential exists with any no-reserve lot, even when presented in near-flawless condition such as this one. Visually, it had been restored, after 2004, to its factory-built color/interior combo, at which time a period-correct 365-hp 327 had been installed. A new owner at the time preferred driving, so \$45,000 worth of mechanical and chassis upgrades were performed, including power steering and brakes, a wide-ratio transmission, neoprene fender liners, and suspension bits. And therein may lay the answer to the result — that perhaps purists outnumbered enthusiasts.



SHELBY
YEAR: 1965 **RESERVE:** Undisclosed
MODEL: G.T. 350 **SELLING PRICE:** \$379,000
CONDITION: Restored/#2 **AVG. SELLING PRICE:** \$450,000

If you've not guessed, Shelbys are a popular draw at the Monterey auctions, and like others, this G.T. 350 had a story. According to records, this early "two-digit" edition ("5S053") was built with a trunk-mounted battery, done so to meet SCCA homologation rules. Sold through Tasca Ford, its chain of ownership and history was documented, including the post-1984 restoration, which conflicted with the catalog's "remains overwhelmingly original" statement, especially when the next line casually mentioned the "upgraded five-speed manual" (the original T-10 accompanied the sale). The biggest nit, though, had to be the severely delaminating windshield.



FORD
YEAR: 1966 **RESERVE:** Undisclosed
MODEL: GT40 Mk II **SELLING PRICE:** \$9,795,000
CONDITION: Refurbished/#1- **AVG. SELLING PRICE:** N/A

There are GT40s, and then there are *the* GT40s; the cars that famously raced at Le Mans. Here was one of those few that asserted itself at RM's sale in fine fashion. After cutting its teeth at Daytona and Sebring, the chassis, P/1016, was sent to Le Mans in the livery pictured here, where it famously finished third overall in Ford's storied 1-2-3 sweep. Its '67 career was less glorious, and, through a series of events, the car was eventually misidentified and very nearly lost its significant race history. The Ford's entire story is an easy find online, and it presented in glorious fashion at this event and sold within estimate.



WIN A 1962 CORVETTE CONVERTIBLE! Roman red with fawn beige interior. Purchased from previous owner of 30 years. 300 hp, 4-spd, 327 ci, white wall tires, numbers matching. 18th Annual Corvette Raffle, only 10,000 chances avail. Grand Prize: 1962 Corvette or \$40,000; 2nd Prize \$500; 3rd Prize \$250. Donation: \$25/ticket or 5/\$100. Drawing 4/27/19. Need not be present to win; all orders must be received by noon 4/27/19. Please send name, address and telephone number, check, money order or credit card to: C.C.A.B.C or Colonel Crawford Athletic Boosters Club, Dept HMM, PO Box 96, Galion, Ohio 44833. Info: 419-569-9312 or 419-612-1173; visit: colcrawfordcorvetteraffle.com

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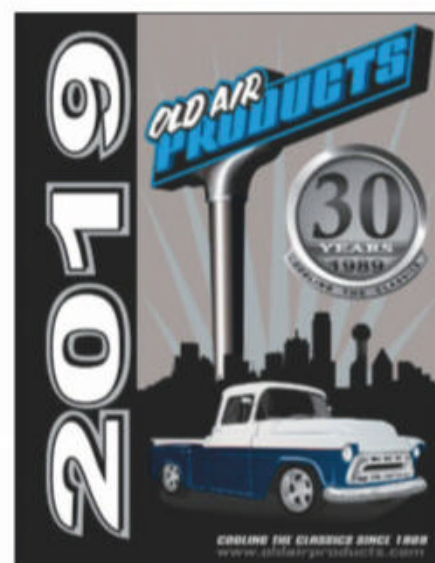
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■ AUCTION NEWS



BONHAMS: 1965 CHEVROLET CORVETTE FUELIE ROADSTER—\$109,200



RUSSO AND STEELE: 1967 DODGE CHARGER HEMI—\$280,500



BARRETT-JACKSON: 1968 CHEVROLET CORVETTE L88 COUPE—\$291,500



MECUM AUCTIONS: 1967 SHELBY G.T. 500 SUPER SNAKE—\$2,200,000

REVIEW: THE NEW YEAR ROLLS IN WITH MUSCLE CARS TAKING CENTER STAGE

Monterey in August, with its high-end collector-car sales, often makes mainstream news headlines that go well beyond the people and businesses that make up our hobby. Last year, for instance, when RM Sotheby's sold a Ferrari for more than \$48,000,000, it was front-page fodder. Other high-zoot sports cars and vintage classics also drew attention. As 2019 got under way, even though there were a handful of European sports cars that ventured into the seven-figure territory, the meat and potatoes of the auctions came in the form of muscle cars, from factory-original, numbers-matching, concours-worthy examples to wild customs that combined classic styles with modern American V-8 running gear of one sort or another.

Mecum Auctions rang in the new year with a massive, 11-day, 3,234-car sale in Kissimmee, Florida, that pulled in \$105 million on the sale of 2,328 vehicular lots for a solid 72-percent sell-through rate. Though the top lot was a modern Ferrari, the second-highest price went to a 1967 Shelby G.T. 500 Super Snake, a one-of-one GT40-spec 427-powered car built for Goodyear for tire testing; it sold for \$2.2 million, a record for the most expensive Mustang yet to sell at auction. Seven of the top-11 vehicles sold were muscle cars. Why 11? Well, a pair of Tuxedo Black 1969, L88-powered Corvettes, one a numbers-matching, low-mileage coupe, and the other a convertible, and both Bloomington Gold and NCRS Top Flight award winners, sold together in a combined lot for \$990,000. Other top lots included a '69 Camaro ZL-1, a "carryover" '66 Shelby G.T. 350, a '63 Corvette Z06 coupe, and a Ford GT, that model seemingly a staple at every current auction.

Barrett-Jackson reported a record \$118 million on the sale of more than 1,800 vehicles, with an impressive 99.75-percent sell-through rate at the almost exclusively no-reserve auction. In addition, the company also sold \$11 million on several lots

for charity, including \$2.5 million for the very first 2019 Ford GT Heritage Edition coupe. Including \$4 million in memorabilia sales, Barrett-Jackson reported a grand total of \$131.6 million. Excluding the charity cars, six of the top-10 sold lots were American cars, including a 2005 Saleen S7 Twin Turbo, a trio of 2006 Ford GT Heritage Editions, a 1967 Ford Mustang actually used in the movie *Gone in 60 Seconds* (as opposed to so many clones we have seen over the years), and a highly customized 1963 Corvette coupe.

That customized Corvette, which sold for \$385,000, might just have been the story of the Barrett-Jackson event, an example of wise sellers enjoying a market trend. While a genuine 1968 Corvette L88 coupe sold for \$291,500, no less than six resto-modded 1960s Chevrolets—five Corvettes and one Camaro—sold for \$330,000 each, an impressive figure, particularly when compared to the L88. Plenty of other customized muscle cars, trucks, and SUVs rolled across the block and found new homes at Barrett-Jackson, many with eye-popping prices.

While Russo and Steele, a relatively high-volume seller, had its share of resto-mods, it instead made its own news with the sale of a low-mileage, "all original survivor" 1967 Dodge Charger Hemi that pulled in \$280,500, and a numbers-matching Hemi/four-speed 1970 Plymouth 'Cuda coupe that sold for a strong \$231,000. It shouldn't surprise anyone to see a 2006 Ford GT also on this list at \$286,000.

Among the other, high-end auctions, Worldwide, Bonhams, Gooding, and RM Sotheby's all had a select few muscle cars for sale, with Gooding selling a pair of 289 Cobras, one a '64 at \$1,050,000 and the other a '65 at \$912,500. Yes, Gooding, too, had a Ford GT cross the block, ultimately selling for \$280,000. Worldwide sold a '69 Corvette L88 for \$522,500 and a '70 Mustang Boss 429 for \$247,500. One lucky Bon-



MECUM AUCTIONS: 1970 PONTIAC GTO CONVERTIBLE RAM AIR III

PREVIEW

With spring in full bloom (or a muddy thaw up here in Vermont), April will see a fair number of auctions, from big-name events in Houston, Texas, and Palm Beach, Florida, presented by Mecum and Barrett-Jackson, respectively, to other sales in the heart of the country: the Branson Auction in Missouri; Hooley Collector Car Auction in Goshen, Indiana; Carlisle Auctions in Pennsylvania; and the Bonhams sale of the Tupelo Automobile Museum Collection in Mississippi.

While most of the auctions are still taking consignments, look to their websites for listings of available lots as the auctions draw closer. Already, we've spotted a few cars to be on the lookout for, such as a Cardinal Red with black top 1970 Pontiac GTO equipped with a documented, numbers-matching Ram Air III 400-cu.in. V-8, reported to be one of just 114 Ram Air III convertibles built in 1970. Mecum Auctions will offer the car at its sale at the NRG Center in Houston, one of approximately 1,000 cars to cross the block.

hams bidder went home with a 1965 Corvette fuelie roadster in a killer color combination of Glen Green over saddle leather that sold for \$109,200. Among its classics and European sports cars, RM Sotheby's also offered a smattering of interesting muscle cars, selling a 1965 Shelby G.T. 350 for \$357,000 and a Hemi/four-speed '70 'Cuda coupe for \$173,600, as well as a pair of C2 Corvettes. Total sales in Arizona (not including charity cars and automobilia) reached at least \$240 million.

Meanwhile, in Concord, North Carolina, Tom Mack Auctions sold 75 of 114 lots registered, for a total take of \$1.2 million. A more accessible middle-class affair for the common man, the Tom Mack auction saw a fair number of muscle car lots find new homes, such as a 1966 Ford Fairlane GTA that sold for \$22,000, a 1969 Corvette 427/390 for \$45,000, and a 1970 Mercury Cougar for \$19,000.

Look for detailed writeups on all of these events in upcoming issues of *Hemmings Muscle Machines*. ■

APRIL

4-6	MECUM Houston 262-275-5050 www.mecum.com
11-13	BARRETT-JACKSON Palm Beach, Florida 480-421-6694 www.barrett-jackson
12-13	BRANSON Branson, Missouri 800-335-3063 www.bransonauction.com
20	HOOLEY Goshen, Indiana 574-596-9890 www.bartelandcompany.com
25-26	CARLISLE Carlisle, Pennsylvania 717-960-6400 www.carlisleauctions.com
26-27	BONHAMS Tupelo, Mississippi 415-391-4000 www.bonhams.com

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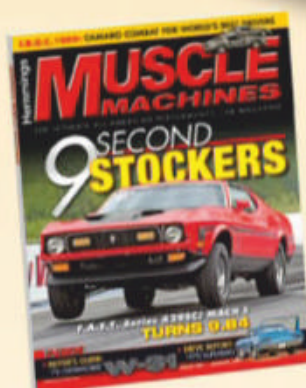
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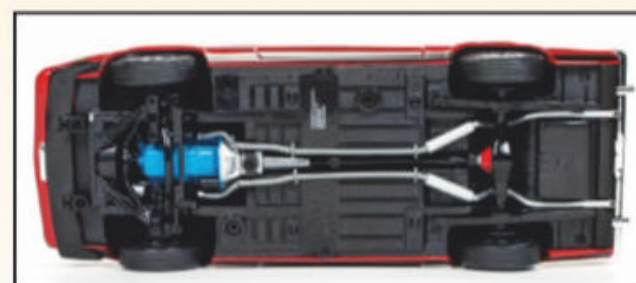
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Compiled by Tom Comerro



Spring Carlisle kicks off auto show and flea market season on April 24-28, hosting more than 100,000 collector- and classic-car enthusiasts participating in swap meets, car corrals, auctions, and more.

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- 4-6 GREENVILLE SWAP MEET & CAR SHOW**
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- 4-6 MECUM AUCTION**
Houston, Texas 262-275-5050
- 4-7 CHARLOTTE AUTOFAIR**
Concord, North Carolina 704-841-1990
- 5-7 PORTLAND SWAP MEET**
Portland, Oregon 503-678-2100
- 6-7 COLUMBUS SWAP MEET**
Columbus, Ohio 614-235-5833
- 7 AUTOMOTIVE SWAP MEET**
Burnt Hills, New York 518-384-5431
- 7 LONG BEACH HI PERFORMANCE SWAP MEET**
Long Beach, California 800-762-9785
- 7 SUMTER SWAP MEET**
Bushnell, Florida 727-848-7171
- 11-13 BARRETT-JACKSON AUCTION**
Palm Beach, Florida 480-421-6694
- 12-13 BRANSON AUCTION**
Branson, Missouri 800-335-3063
- 14 ALL-AUTOMOTIVE SWAP MEET**
Stafford Springs, Connecticut 860-649-3697

- 14 POMONA SWAP MEET & CAR SHOW**
Pomona, California 714-538-7091
- 19-21 NEW BRAUNFELS SWAP MEET**
New Braunfels, Texas 830-708-1372
- 20 HOOLEY CLASSIC CAR AUCTION**
Goshen, Indiana 574-825-2115
- 20-28 KOOL APRIL NITES**
Redding, California 530-226-0844
- 24-28 SPRING CARLISLE**
Carlisle, Pennsylvania 717-243-7855
- 25-27 PATE SWAP MEET**
Fort Worth, Texas 713-516-0087
- 26-27 BONHAMS AUCTION**
Tupelo, Mississippi 415-391-4000
- 26-28 ANNUAL JEFFERSON AUTO PARTS SWAP MEET**
Jefferson, Wisconsin 608-244-8416
- 27 ANNUAL LIONS CLUB CAR SHOW**
Tomball, Texas 713-410-6542
- 27 SACRAMENTO CLASSIC CAR & PARTS SWAP MEET**
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Do You Qualify?

What qualifies you as a certifiable muscle car fanatic? I have a few interesting stories about muscle car fanaticism at its very best... or worst, depending on your perspective. You decide if you qualify. Most of these incidents are from brand-specific car shows that I attended over the years, where winning a trophy was the ultimate reward for restoring your muscle car.

The first occurred at an all-Chevy event in the mid-'80s when I was working as editor of a then-new muscle car magazine. A flatbed car hauler pulled onto the showfield with a beautiful Cranberry Red 1970 LS-6 Chevelle four-speed convertible on board. After careful unloading, the car was facing the wrong way, so the show organizers asked the owner to please turn it around and drive over to be placed for judging, prompting the owner to state, "This car will never run!" I was genuinely shocked. It was an immaculate restoration, but to me, at that point, it was no longer a muscle car, it was a flower pot on wheels.

After some additional words, and threats of expulsion, the car was physically maneuvered to conform with the rest of the vehicles. I inspected the car and it was a professional, very high-dollar restoration with nothing but NOS parts, but it was functionally useless. Seemed like a waste of such a great car.

Another incident involved a GTO under a blue tarp. All I could think of was the paint damage that tarp might be doing, until it was revealed the GTO was wrapped in several layers of blankets and then covered with the tarp. It looked like it was in a cocoon. Not 1 inch of this vehicle was visible, and it was not unwrapped until early the next morning. I made a point of being there for the unveiling! It was truly a stunning, beautiful '67 GTO that was meticulously restored. This owner also preferred to not fire the engine, but took the process of vehicle movement a step further. The blue tarp was spread out in the space the car was to occupy and the trailer backed into place to roll the car off onto the tarp. I asked the owner why he wanted to roll the GTO onto the tarp, and he commented, "So the tires never touch the ground!" Whoa... now that was a new one!



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point, it was
no longer a
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it was a flower
pot on wheels.

My last example occurred at the first all-Corvette show I'd ever participated in. I had just finished a restoration on a 1971 small-block Corvette coupe. Since it was also my daily transportation, I had nicely cleaned the engine compartment and interior, and waxed the exterior, and it looked pretty good.

Then a trailer pulled into the parking lot carrying my favorite 'Vette of all time, a completely restored red-on-red '63 "split-window" coupe. The car was pushed off the trailer and into its class lineup. The owner then proceeded to sit on the ground and clean each tire tread completely around the exposed areas of all four tires. What was really interesting to me was that almost every other entrant was doing the same kind of detailing. I consider myself a pretty picky guy when it comes to my cars, but how far do you go for that \$10 trophy? My everyday driver '71 still won second place in the stock class, even with some dirt in the tire treads, and I have that golden trophy to prove it!

These are extreme cases of muscle car fanaticism, but my point is that these cars were made to drive. Paintings and sculpture are made to be admired as we quietly enjoy their beauty. Muscle cars were created to make noise and go fast. It's a participation hobby, and in this case, I think participation means driving, not worshipping.

I can understand the concerns of someone who has just shoveled 110-grand into a muscle car restoration and is worried about driving in traffic, especially in L.A. traffic, but in reality it's no different than cruising around in your daily driver. The other motorists around you don't want you hitting them either. A little burnt paint on the exhaust manifolds gives your engine compartment character; the thrill of sound and acceleration are the payback on your investment.

I drive my GTO almost every weekend because I can't stand having it just look pretty in the garage. There's nothing like stomping the accelerator, opening the Tri-Power, and laying down two rows of rubber. I feel sorry for those who deprive themselves of this enjoyable experience because of their fanatic desire to maintain automotive perfection.

So now, do you qualify? ■

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